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(71) Applicants:  
• **Garza-Montemayor, José-Guadalupe**  
**66050 Escobedo Nuevo León (MX)**  
• **Garza-Montemayor, Jorge-Eugenio**  
**66050 Escobedo Nuevo León (MX)**

(72) Inventors:  
• **Garza-Montemayor, José-Guadalupe**  
**66050 Escobedo Nuevo León (MX)**  
• **Garza-Montemayor, Jorge-Eugenio**  
**66050 Escobedo Nuevo León (MX)**

(74) Representative: **Michalski, Stefan et al**  
**Michalski Hüttermann & Partner**  
**Patentanwälte**  
**Speditionstraße 21**  
**40221 Düsseldorf (DE)**

(54) **PRESSURE-COUPLING SYSTEM FOR USE BETWEEN COUPLING MEMBERS OR PARTS**

(57) A snap coupling system for pieces or metallic or non metallic coupling members, that require to be attached perpendicularly in a "T" fashion, in a cross "+" fashion or angularly, by which a tubular male coupling member having one or more retention tabs that are temporarily flexed, enters in slots or receiving apertures of

another piece or female coupling member, tubular or planar, where they engage, by which they can be readily attached two tubular members or one tubular member and one planar member, in a perpendicular way, in a cross fashion or angularly, without the necessity of using skilled labor.

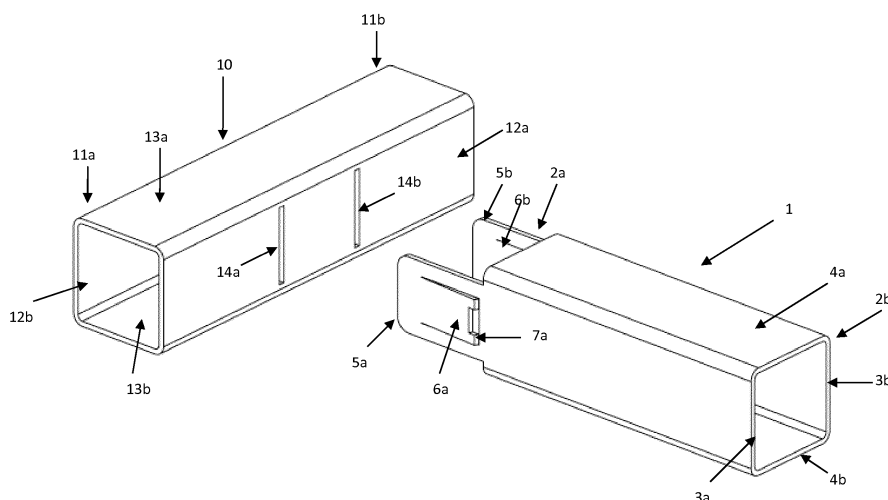


FIGURE 1

**Description**

## BACKGROUND OF THE INVENTION.

## 5 A. FIELD OF THE INVENTION.

10 **[0001]** This invention refers to a snap coupling system which allows instant coupling and safely linking of several coupling members to each other, wherein one or more retention tabs of one male tubular coupling member is temporarily flexed to enter into guides or receiving cavities of another female tubular coupling member in which the tabs snaps are engaged; and more particularly is related to a special snap coupling system for joining at least one tubular member to another tubular or flat member in different coupling angles.

## B. BACKGROUND OF THE INVENTION.

15 **[0002]** Snap joins are well known, these are commonly used to instantly coupling and securing a variety of tubular coupling members to each other, particularly of plastic materials because the plastic material is particularly suitable because of its flexibility which allows that coupling protrusions of the snap joints could be temporarily flexed to be introduced into a coupling receptacle of another tubular member.

20 **[0003]** The advantage of the snap joint couplings, is that allow to couple two tubular coupling members without the necessity to use adhesives, bolts, screws, nor special tools to thermally join said tubular coupling members, for which it is necessary to use qualified manpower.

25 **[0004]** For metallic or non-metallic coupling members, the thermal join by means of welding or fusion is the common way of permanently joining said metallic or non-metallic coupling members. Other joining methods of metallic or non-metallic coupling members involve the use of adhesives or the use of a third holding member to carry out the joining or holding of the elements to each other.

**[0005]** The joining by means of welding, requires special tools as well as qualified manpower and safety equipment. Additionally, the application of welding requires counting with a power source of fuel, as well as measuring and calibration instruments for the materials in order to achieve a squaring of the join (use of levels and squares).

30 **[0006]** In view of the former, applicants developed a snap coupling system special for metallic or non metallic coupling members requiring joining in diverse coupling angles, by which a tubular male coupling member having one or more retention tabs which are temporarily flexed to enter into guides or receiving cavities of another female coupling member either tubular or flat, in which the tabs snaps, by which two coupling members can be rapidly joined, without the necessity of qualified manpower.

35 **[0007]** By means of the snap coupling system, of the present invention, two metallic or non metallic coupling members can be permanently or semi permanently joined in diverse coupling angles, without the necessity of use welding, adhesives, additional holding elements, instruments or tools, with which time is saving by avoiding the use of welding. Besides, as the snap coupling uses guides to carry out said coupling, the necessity to measure and size the coupling members is avoided in order to achieve a precise joining, with which one can obtain additional time saving in the joining of the metallic or non-metallic coupling members.

40 **[0008]** Furthermore, as by means of the snap coupling system of the present invention, the coupling members can be easily assembled in the place wherein these will be used, it is not necessary to transport to the assembling place the assembled or welded pieces in structures which can be too large and difficult to transport.

**[0009]** The snap coupling system of the present invention, promotes the design of individual pieces or coupling members to be assembled, which can be efficiently packed and translated.

## SUMMARY OF THE INVENTION

50 **[0010]** It is therefore a main object of the present invention, to provide a snap coupling system between coupling members, special to join metallic or non-metallic coupling members, in diverse coupling angles, by which a tubular male coupling member having one or more retention tabs which are temporarily flexed to enter into slots or receiving cavities of another female coupling member either tubular or flat, in which the tabs snaps, by which two coupling members can be rapidly joined, without the necessity of qualified manpower.

55 **[0011]** It is another main object of the present invention, to provide a snap coupling system between coupling members, of the above disclosed nature, by which two metallic or non-metallic coupling members can be permanently coupled in diverse coupling angles, without the necessity to use welding, additional holding elements or tools, by which time is saved because its welding is not necessary.

**[0012]** It is still another main object of the present invention, to provide a snap coupling system between coupling members, of the above disclosed nature, in which the snap coupling provides guides in the coupling members, to carry

out the coupling, with which the need of measuring and sizing the coupling members to get a precise coupling is avoided, obtaining additional saving of time in the coupling of the two coupling members.

**[0013]** It is an additional object of the present invention, to provide a snap coupling system between coupling members, of the above disclosed nature, by which coupling members can be easily coupled in the place in which they are going to be used, without the necessity to transport the coupling members already welded to the assembling place, in structures which can be too long and difficult to be transported.

**[0014]** It is another additional object of the present invention, to provide a snap coupling system between coupling members, of the above disclosed nature, which promotes the design of individual coupling members which can be efficiently packed and translate.

**[0015]** These and other objects and advantages of the snap coupling system between coupling members, of the present invention, will be clear enough to those persons having ordinary skill in the art, from the following detailed description of the embodiments of the invention, which will be disclosed with reference to the accompanied drawings and which will be within the true scope of the present invention.

#### BRIEF DESCRIPTION OF THE DRAWINGS.

##### **[0016]**

Figure 1, is a conventional schematic perspective view of the snap coupling system between coupling members, of the present invention, showing a tubular male coupling member, of a quadrangular cross section, showing retention tabs lifted in an angle directed outwardly and a tubular female coupling member, of a quadrangular cross section showing retention slots, to be assembled with the male coupling member, in a "T" fashion, which constitutes a first preferred embodiment of the system of the present invention;

Figure 1A, is a schematic conventional perspective view of the snap coupling system between coupling members, of the present invention, similar to that of Figure 1, showing retention tabs introduced in an angle directed ;

Figure 1 B, is a schematic conventional perspective view of the snap coupling system between coupling members, of Figure 1, of the present invention, assembled, showing its coupling members partially cut;

Figure 1C, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, showing the tubular male coupling member, of a quadrangular cross section, showing a retention tab lifted in an angle directed outwardly, in each of the walls of a coupling end, and a tubular female coupling member, of a quadrangular cross section, showing a retention quadrangular aperture in one coupling wall of the female coupling member, placed in an intermediate portion thereof, to be assembled with the male coupling member, in a "T" fashion, constituting another preferred embodiment of the system of Figure 1, in accordance with the present invention;

Figure 1 D, is a schematic conventional perspective view of the snap coupling system, between coupling members, of Figure 1, of the present invention, fully assembled;

Figure 2 is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, showing a tubular male coupling member, of a quadrangular cross section showing its retention tabs lifted in an angle directed outwardly and a tubular female coupling, of quadrangular cross section, showing its retention slots, to be assembled to each other in a "+" fashion, constituting a second preferred embodiment of the system, according to the present invention;

Figure 2A is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, similar to that of Figure 2, showing the retention tabs of both the male member and the female member;

Figure 2B, is a schematic conventional perspective view of the snap coupling system, between coupling members, of Figure 2, of the present invention, fully assembled in a "+" fashion;

Figure 3, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, showing a tubular male coupling member of a quadrangular cross section, showing retention tabs lifted in an angle directed outwardly, and a tubular female coupling member of a circular cross section, showing its retention slots for the coupling in a "T" fashion, constituting a third preferred embodiment of the system, according

to the present invention;

Figure 3A is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, similar to that of Figure 3, showing the retention tabs introduced in an angle directed inwardly;

Figure 3B, is a schematic conventional perspective view of the snap coupling system, between coupling members, of Figure 3, of the present invention, fully assembled in a "T" fashion;

Figure 4, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, showing a tubular male coupling member of a circular cross section, showing retention tabs lifted in an angle directed outwardly, and a tubular female coupling member, of a circular cross section, showing its retention slots, for its coupling in a "T" fashion, constituting a fourth preferred embodiment of the system according with the present invention;

Figure 4A, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, similar to that of Figure 4, showing retention tabs introduced in an angle directed inwardly;

Figure 4B, is a schematic conventional perspective view of the snap coupling system, between coupling members, of Figure 4, of the present invention, fully assembled in a "T" fashion;

Figure 5, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, showing a tubular male coupling member, of a circular cross section, showing retention tabs lifted in an angle directed outwardly, and a tubular female coupling member, of a quadrangular cross section, showing its retention slots curved for its coupling in a "T" fashion, constituting a fifth preferred embodiment of the system according to the present invention;

Figure 5A, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, similar to that of Figure 5, showing the retention tabs introduced in an angle directed inwardly;

Figure 5B, is a schematic conventional perspective view of the snap coupling system, between coupling members, of Figure 5, of the present invention, fully assembled in a "T" fashion"

Figure 6, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, showing a tubular male coupling member, of a quadrangular cross section, showing retention tabs lifted in an angle directed outwardly and a quadrangular retention cut, and a tubular female coupling member, of a circular cross section, showing its retention slots, for its coupling in a "+" fashion, constituting a sixth preferred embodiment of the system according to the present invention;

Figure 6A, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, showing a tubular male coupling member, of a quadrangular cross section, similar to that of Figure 6, showing retention tabs lifted in an angle directed inwardly;

Figure 6B, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, of Figure 6, fully assembled in a "+" fashion;

Figure 7, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, showing a tubular male coupling member of a circular cross section, showing its retention tabs lifted in an angle directed outwardly, and a tubular female coupling member, of a quadrangular cross section, showing its quadrangular retention cut for its coupling in a "+" fashion, constituting a seventh preferred embodiment of the system according to the present invention;

Figure 7A, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, of Figure 7, fully assembled in a "+" fashion;

Figure 8, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, showing a tubular male coupling member of a circular cross section showing retention tabs lifted in an angle directed outwardly, and a tubular female coupling member of a circular cross section, showing its quadrangular cut, for its coupling in a "+" fashion, which constitutes an eight preferred embodiment of the system

according with the present invention;

Figure 8A, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, of Figure 8, fully assembled in a "+" fashion;

Figure 9, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, showing a tubular male coupling member of a quadrangular cross section, showing retention tabs angularly cut and lifted in an angle directed outwardly, and a tubular female coupling member, of a quadrangular cross section, showing its retention slots to be assembled to each other in an angular fashion constituting a ninth preferred embodiment of the system according with the present invention;

Figure 9A, is a schematic conventional perspective view of the snap coupling system, between coupling members, of the present invention, of Figure 9, showing retention tabs angularly cut and in an angle directed inwardly;

Figure 9B is a schematic conventional perspective view of the snap coupling system, between coupling members, of Figure 9, fully assembled in an angular fashion;

Figure 10, is a schematic conventional perspective view of a tenth embodiment of the snap coupling system, between coupling members, showing a tubular male coupling member of a quadrangular cross section, showing two retention tabs in its lateral walls, and two retention tabs in its upper and lower walls, opposed to the lateral walls, lifted in an angle directed outwardly, and a tubular female coupling member of a quadrangular cross section, showing a passing through retention aperture, for assembling to each other in a "+" fashion;

Figure 10A, is a schematic conventional perspective view of the snap coupling system, between coupling members, showing a tubular male coupling member of a quadrangular cross section, showing in turn two retention tabs opposed to each other, in each one of its walls, lifted in an angle directed outwardly, and a tubular female coupling member of a quadrangular cross section, showing a passing through retention aperture, to be assembled to each other in a "+" fashion;

Figure 10B, is a schematic conventional perspective view of the snap coupling system, between coupling members, of Figure 10, showing a tubular male coupling member of a quadrangular cross section y un tubular female coupling member of a quadrangular cross section, fully assembled to each other, in a "+" fashion;

Figure 11, is a schematic front view, of an eleventh embodiment of the snap coupling system, between coupling members, showing a tubular male coupling member of a quadrangular cross section, showing in turn its retention tabs lifted in an angle directed outwardly, and a tubular female coupling member, of a quadrangular cross section, showing its passing through retention aperture, to be assembled to each other, in a "+" fashion, forming a fence or gate;

Figure 11A, is a schematic conventional perspective view of the snap coupling system, between coupling members, of Figure 11, forming a fence or grid, partially assembled; and

Figure 11 B, is a frontal view, similar to that of Figure 11A, showing a variant of the arrangement of the tabs of the male coupling member forming a fence or gate partially assembled.

#### DETAILED DESCRIPTION OF THE INVENTION

**[0017]** The snap coupling system, of the present invention, will be described with reference to the accompanying drawings, using reference numbers to identify the constitutive parts of the system, shown in the drawings which illustrate the preferred embodiments of the invention.

**[0018]** In said specific embodiments, the snap coupling system, of the present invention, which is useful for the assembling of elements of structural use such as those used in the manufacture of: railings, fences, bars and protective fences, gates, surrounding fences, protective screens, carpots, trailers, greenhouses, racks, disassembled structures, pergolas, and canopies, automotive, with line furniture, chassis, metallic furniture, among others.

**[0019]** Referring to a first embodiment of the snap coupling system, between tubular coupling members of a quadrangular cross section, for its assembling in a "T" fashion, of the present invention, illustrated in Figure 1, this comprises:

a tubular male coupling member 1, of a quadrangular cross section, of: a first end 2a and a second end 2b; a first lateral wall 3a and a second lateral wall 3b; an upper wall 4a and a lower wall 4b; a first projection 5a extending

from the first end 2a of the first side wall 3a of the a tubular male coupling member 1, said projection 5a including a retention tab 6a, cut therein, directed to the second end 2b of said a tubular male coupling member 1 and lifted in an angle outwardly of said a tubular male coupling member 1, having a retention edge 7a; and a second projection 5b extending from the first end 2a of the second side wall 3b of the a tubular male coupling member 1, said projection 5b including a retention tab 6b cut therein, directed also to the second end 2b of the a tubular male coupling member 1 and lifted in a angle directed outwardly of said a tubular male coupling member 1, having a retention edge 7b (not illustrated);

a tubular female coupling member 10 to be perpendicularly coupled to the a tubular male coupling member 1, in a "T" fashion, of a quadrangular cross section, and having: a first end 11 a and a second end 11 b; a first side wall 12a and a second side wall 12b, and an upper wall 13a and a lower wall 13b, each of which having an inner wall and an outer wall; a first and a second parallel transversal slots 14a, 14b, each of which extending vertically widthwise to the first side wall 12a of the a tubular female coupling member 10, as it is illustrated in Figure 1, wherein the distance between the first and second slots 14a, 14b is similar to the distance existing between the first and second projections 5a, 5b of the tubular male coupling member 1, as it is illustrated in Figures 1, 1 B and 1 D; and wherein the first and second projections 5a and 5b, with its respective retention tabs 6a, 6b, of the side walls 3a and 3b of the a tubular male coupling member 1, passing in a guided way, momentarily flexing said tabs, through the parallel first and second transversal slots 14 a and 14b of the first side wall 12a of the a tubular female coupling member 10, in a perpendicular way, such that, when the tabs recover its position, its retention edge 7a, 7b (not illustrated) are locked at the inner surface of the first side wall 12a of the a tubular female coupling member 10, being retained both coupling members to each other.

**[0020]** In the embodiment illustrated in Figure 1 A, the retention tabs 6a and 6b (not illustrated) are flexed inwardly of the inner surface of the side walls 3a and 3b of the tubular male coupling member 1, conversely to the embodiment illustrated in Figure 1.

**[0021]** In the embodiment of Figure 1C, the a tubular male coupling member, of a quadrangular cross section, comprising two retention tabs 6a, 6b (not illustrated) lifted in an angle directed outwardly, each of which placed in each of the respective side walls 3a and 3b of the first end 2a of the a tubular male coupling member 1, and two retention tabs 6c, 6d (not illustrated) lifted also in an angle directed outwardly, placed at the same height of the tabs 6a and 6b (not illustrated), each of which placed in each of the respective upper and lower walls 4a and 4b in the same first end of the a tubular male coupling member 1; and; the tubular female coupling member 10, of a quadrangular cross section, showing a quadrangular retention aperture 15 in an intermediate portion of the side wall 12a of the a tubular female coupling member 10, to be assembled with the a tubular male coupling member 1, in a "T" fashion, constituting another preferred embodiment of the system of Figure 1, according with the present invention.

**[0022]** It should be understand that it is possible that some of the walls of the tubular male coupling member, could include only one tab lifted outwardly or inwardly; and the tubular female coupling member could include a single slot, to give a required assembling force.

**[0023]** Or else, it is possible that one of the walls of the a tubular male coupling member, could include a first tab in one of its walls and a second tab in an opposite wall, placed opposite to the first tab, both lifted outwardly; and the tubular female coupling member could have a quadrangular aperture, to provide stronger assembling force.

**[0024]** In all the preferred embodiments, the parallel transversal slots 14a and 14b (Figure 1) or the quadrangular aperture 15 (Figure 1C) are made with means which allow high precision cuts such as a cutter by water jet cutting, oxygen cut , plasma cutting and laser cutting and precision die cut, to mention some of them, in order to obtain precision cuts allowing the insertion of the first and second projections 5a and 5b with very close tolerances which provides an optimum adjustment to the joining.

**[0025]** Also, it should be understand that the projections and/or the tabs of the tubular male coupling member should be dimensioned such that they could enter into the slots or quadrangular apertures of the tubular female coupling member.

**[0026]** The retention tabs 6a and 6b of the first and second projections 5a and 5b (Figure 1) are formed in said projections by means of a semi quadrangular cut which defines the form of each tab, and afterwards each tab 6a, 6b already formed, is flexed and lifted in an angle directed inwardly or outwardly regarding the plane of the corresponding projections 5a and 5b, such that the retention edge 7a and 7b remain protruded outwardly or inwardly of the a tubular male coupling member 1, so that they locked leaning on the inner edge of the slots 14a and 14b of the tubular female coupling member 10.

**[0027]** Additionally, each tab 6a, 6b can include a notch in a central portion of the end thereof in order to introduce a tool there through and facilitate flexing of the tab to a desired position.

**[0028]** When both tubular male 1 and female 10 coupling members are to be joined, the first and second projections 6a, 6b of the a tubular male coupling member 1 are perpendicularly inserted into the first and second parallel slots 14a, 14b of the a tubular female coupling member 10, such that the retention tab 6a, 6b of each projection 5a, 5b are flexed

staying in the same plane as the corresponding projection 5a and 5b, until it completely enters perpendicularly into the parallel slots 14a, 14b of the a tubular female coupling member 10, and turns back by deflection to its lifted or sunken position, such that the retention edge 7a, 7b of each tab 6a, 6b, form a padlock being locked on the inner surface of the inner surface of the first side wall 12a of the a tubular female coupling member 10, as it is shown in Figures 1, 1A, 1 B, 1C and 1 D, avoiding that the projection 6a, 6b could slide outside of the slot 14a, 14b of the a tubular female coupling member 10.

**[0029]** Additionally that the projections 6a, 6b of the a tubular male coupling member 1 cannot be withdrawn from the a tubular female coupling member 10, they also cannot turn because of the closed tolerance with which they were inserted, because there is no space of "backlash" between the projections 5a and 5b, the parallel transversal slots 14a, 14b and the inner surface of the first side wall 12a of the a tubular female coupling member 10.

**[0030]** In this way, in the preferred embodiments of the invention, illustrated in Figure 1 and in Figure 1 A, the a tubular male coupling member 1 stay joined by an end 2a to the a tubular female coupling member 10, perpendicularly, forming a "T" as it is shown in Figure 1 B and Figure 1 D.

**[0031]** The joining between the a tubular male coupling member 1 and the a tubular female coupling member 10, can or cannot be disassembled, depending of the position and angle of each tab in the moment of the insertion of the projections. In the preferred embodiments of the invention, the joining is permanent.

**[0032]** In a second embodiment of the invention, illustrated in Figure 2, the snap coupling system, between coupling members of a quadrangular cross section to be assembled in a "+" fashion, of the present invention, this comprises:

a tubular male coupling member 20, of a quadrangular cross section, having: a first side wall 21 a and a second side wall 21 b; an upper wall 22a and a lower wall 22b; a first and a second slots 23a, 23b, parallel to each other, both made transversally at an intermediate portion of the side walls 21 a, 21 b, extending from the edge of the lower wall 22b to the upper wall 22a; a first retention tab 24a and a second retention tab 24b (not illustrated), both practiced between the slots 23a and 23b, in each side wall 21 a and 21 b, beginning from the lower wall 22b to the upper wall 22a, presenting a retention edge 25a and 25b (not illustrated), respectively;

a tubular female coupling member 30, of a quadrangular cross section, to be perpendicularly coupled to the a tubular male coupling member 20 in a "+" fashion, having a first side wall 31 a and a second side wall 31 b; an upper wall 32a and a lower wall 32b; a first transversal slot 33a and a second transversal slot 33b (not illustrated), parallel to each other, each of which extends vertically from the upper wall 32a to the lower wall 32b; and a quadrangular cut 34 in the upper wall 32a, to allow the insertion of the a tubular male coupling member 20, between the slots 33a and 33b (not illustrated), so that the retention edges 25a and 25b (not illustrated) stay locked against the inner edges of the upper edge of the upper wall 32a at both sides of the quadrangular cut 34, staying in this way coupled the a tubular male coupling member 20, with the a tubular female coupling member 30 in a "+" fashion as it is illustrated in Figures 2 and 2B;

the tubular male coupling member 20, further including a quadrangular cut (not illustrated) in its lower wall 22b, in such a way that can be tightly received in the tubular female coupling member 30 to form a joining in a "+" fashion between both tubular coupling members.

**[0033]** To obtain a "+" highly secure, as it is illustrated in Figure 2A, the tubular female coupling member 40 can include, beside of the slots 43a and 43b and the quadrangular cut 44, a first retention tab 45a and a second retaining tab 45b, both practiced between the slots 43a and 43b, in each lateral wall 41 a and 41 b, starting from the edge of the lower wall 42b to the upper wall 42a, presenting a retention edge 46a and 46b (not illustrated), respectively, staying in this way firmly coupled the tubular male coupling member 20 with the tubular female coupling member 40 in a "+" fashion.

**[0034]** In a third embodiment of the invention, illustrated in Figure 3, the snap coupling system, between a tubular male coupling member, of a quadrangular cross section, to be coupled in a "T" fashion with a tubular female coupling member, of a circular cross section, of the present invention, this comprises:

a tubular male coupling member 50, of a quadrangular cross section, having a first end 51 a and a second end 51 b; a first side wall 52a, and a second side wall 52b; an upper wall 53a and a lower wall 53b; a first projection 54a extending from the first end 51 a of the first side wall 52a of the a tubular male coupling member 50, said projection 54a including a retention tab 55a, cut therein, directed to a second end 51 b of said a tubular male coupling member 50 and lifted in an angle outwardly of said a tubular male coupling member 50, presenting a retention edge 56a; and a second projection 54b, extending from the first end 51 a of the second side wall 52b of the tubular male coupling member 50, said projection 54b including a retention tab 55b, cut therein, directed also to the second end 51 b of said a tubular male coupling member 50 and lifted in an angle outwardly of said a tubular male coupling member 50, presenting a retention edge 56b (not illustrated).

a tubular female coupling member 60 to be perpendicularly coupled to the a tubular male coupling member 50, in a "T" fashion, of a circular cross section, having: an inner surface and an outer surface; a first end 61 a and a second

end 61 b; a first and a second parallel transversal slots 62a, 62b, aligned at the same height to each other, in an intermediate portion of the a tubular female coupling member 60, each of which extends vertically widthwise of the of the wall of the tubular female coupling member 60, such as it is illustrated in Figure 3, wherein the distance between the first and second slots 62a, 62b is similar to the distance existing between the first and second projections 54a, 54b of the tubular male coupling member 50 as it is illustrated in Figure 3;  
 the projections 54a, 54b and its retention edges 56a, 56b, (not illustrated), preferably having its edge curved, with the same curvature as the a tubular female coupling member 60;  
 wherein the first and second projections 54a and 54b with their respective retention tabs 55a, 55b of the side walls 52a and 52b of the a tubular male coupling member 50, passing in a guided way through the first and second parallel transversal slots 62a, 62b of the surrounding wall of the a tubular female coupling member 60 in a perpendicular way, so that the retention edge 56a, 56b (no illustrated) of each of the first and second retention tabs 56a and 56b of the projections 54a, 54b, be locked at the inner wall of the a tubular female coupling member 60, being retained both coupling members to each other, in a "T" fashion, as can be observed from Figure 3B.

**[0035]** In the embodiment illustrated in Figure 3A, the retention tabs 55a and 55b stay flexed inwardly of the inner surface of the side walls 52a and 52b of the tubular male coupling member 50, inversely from the embodiment illustrated in Figure 3.

**[0036]** In a fourth embodiment of the invention, illustrated in Figure 4, the snap coupling system, between a tubular male coupling member, of a circular cross section, to be assembled in a "T" fashion with a tubular female coupling member, of a circular cross section, of the present invention, this comprises:

a tubular male coupling member 70, of a circular cross section, and having: a first end 71 a and a second end 71 b; a first projection 72a extending from the first end 71 a of the a tubular male coupling member 70, said projection 72a including a retention tab 73a, cut therein, directed from the second end 71 b of said tubular male coupling member 70 and lifted in an angle outwardly of the a tubular male coupling member 70, presenting a retention edge 74a; and a second projection 72b extending from the first end 71 a of the a tubular male coupling member 70, opposite to the first projection 72a, said second projection 72b including a retention tab 73b, cut therein, directed also to the second end 71 b of said tubular male coupling member 70 and lifted in an angle outwardly of the a tubular male coupling member 70, presenting a retention edge 74b (not illustrated);  
 a tubular female coupling member 80 to be perpendicularly coupled to the a tubular male coupling member 70, in a "T" fashion, of a circular cross section and having: an inner surface and an outer surface; a first end 81 a and a second end 81 b; a first and a second parallel transversal slots 82a, 82b aligned at the same height to each other, at an intermediate portion of the a tubular female coupling member 80, each of which extends vertically widthwise of the wall of the a tubular female coupling member 80, such as illustrated in Figure 4, wherein the distance between the first and second slots 82a and 82b is similar to the distance existing between the first and second projections 72a and 72b of the a tubular male coupling member 70, such as is illustrated in Figure 4;  
 the projections 72a and 72b and its retention edges 74a and 74b (not illustrated) preferably having its edge curved with the same curvature as the tubular female coupling member 80,  
 wherein the first and second projections 72a and 72b, with their respective retention tabs 73a and 73b of the tubular male coupling member 70, passing in a guided way through the first and second parallel transversal slots 82a, 82b of the tubular female coupling member 80, in a perpendicularly way, such that the retention edge 74a, 74b (not illustrated) of each of the first and second retention tabs 73a and 73b of the projections 72a, 72b, stay locked on the inner surface of the a tubular female coupling member 80, being retained both coupling members to each other in a "T" fashion, such as can be observed from Figure 4B.

**[0037]** In the embodiment illustrated in Figure 4A, the retention tabs 73a and 73b are flexed inwardly of the inner surface of the tubular male coupling member 70, inversely to the embodiment illustrated in Figure 4.

**[0038]** In a fifth embodiment of the invention, illustrated in Figure 5, the snap coupling system, between tubular male coupling member, of a circular cross section to be assembled in a "T" fashion, with a tubular female coupling member, of quadrangular cross section, of the present invention, this comprises:

tubular male coupling member 90 of a circular cross section, having: a first end 91 a and a second end 91 b; a first projection 92a extending from the first end 91 a of the tubular male coupling member 90. Said projection 92a including a retention tab 93a, cut therein, directed to the second end 91 b of said tubular male coupling member 90 and lifted in angle outside of said tubular male coupling member 90, presenting a retention edge 94a; and a second projection 92b opposite to the a first projection 92a in the same end 91 a, extending from the first end 91 a of the tubular male coupling member 90, to the second end 91 b of the tubular male coupling member 90, said second projection 92b including a retention tab 93b cut therein, directed also to the second end 91 b of tubular male coupling member 90



and lifted in an angle directed outwardly of said tubular male coupling member 90, presenting a retention edge 94b (not illustrated);

tubular female coupling member 100, to be perpendicularly coupled to the tubular male coupling member 90, in a "T" fashion, of a quadrangular cross section, having an inner surface and an outer surface; a first end 101 a and a second end 101 b; a first lateral wall 102a and a second lateral wall 102b; and an upper wall 103a and a lower wall 103b, a first and a second parallel transversal slots 104a, 104b, having a curvature to the ends 101 a, 101 b respectively, similar to those of the projections 92a, 92b of the tubular male coupling member 90, aligned at the same height to each other, at an intermediate portion of the tubular female coupling member 100, each of which extending vertically widthwise of the side wall 102a of the tubular female coupling member 100, such as it is illustrated in Figure 5, wherein the distance between the first and second slots 104a and 104b is similar to the distance existing between the first and second projections 92a and 92b of the tubular male coupling member 90, such as it is illustrated in Figure 5;

wherein the first and second projections 92a, 92b with its respective retention tabs 93a, 93b of the tubular male coupling member 90 passing in a guided way through the first and second parallel transversal slots 104a, 104b of the tubular female coupling member 100 in a perpendicular way, in such a way that the retention edge 94a and 94b (not illustrated) of each of the first and second retention tabs 93a and 93b of the of the projections 92a, 92b, are locked on the inner surface of the tubular female coupling member 100, being retained both coupling members to each other , in a "T" fashion, such as it is illustrated in Figure 5B;

**[0039]** In the embodiment illustrated in Figure 5A, the retention tabs 93a, 93b being flexed inwardly at the inner surface of the tubular male coupling member 90, conversely of the embodiment of Figure 5.

**[0040]** In a sixth embodiment of the invention, illustrated in Figure 6, the snap coupling system between a tubular male coupling member of a quadrangular cross section, to be assembled in a "+" fashion, with a tubular female coupling member of a circular cross section, of the present invention, this having:

a tubular male coupling member 110, of a quadrangular cross section, having a first side wall 111 a and a second side wall 111 b; an upper wall 112a and a lower wall 112b; a first retention tab 113a and a second retention tab 113b, parallel to each other, both practiced in a transversal way in an intermediate portion of the side walls 111 a and 111 b extending from the edge of the upper wall 112a to the lower wall 112b presenting a retention edge 114a and 114b respectively, and a rectangular cut 115 in the upper wall 112a, placed upwardly of the tabs 113a and 113b, to allow the input of the tubular female coupling member 120 into the tubular male coupling member 110 through said rectangular cut 115;

tubular female coupling member 120 to be coupled to the tubular male coupling member 110 in a "+" fashion, of a circular cross section, having: an inner surface and an outer surface; a first end 121 a and a second end 121 b; a first and a second parallel transversal slots 122a and 122b, aligned at the same height to each other, at an intermediate portion of the tubular female coupling member 120, each of which extends vertically widthwise of the tubular female coupling member 120, such as it is illustrated in Figure 6, wherein the distance between the first and second slots 122a and 122b is similar to the distance existing between the first and second tabs 113a and 113b, of the tubular male coupling member 110, such as is illustrated in Figure 6;

the retention edges 114a and 114b of the retention tabs 113a and 113b preferably having its edge curved with the same curvature as the inner of the tubular female coupling member 120;

wherein the first and second tabs 113a and 113b of the side walls 111 a and 111 b of the tubular male coupling member 110, passing in a guided way through the first and second parallel transversal slots 122a, 122b of the tubular female coupling member 120, in a "+" fashion in such a way that the retention edge 114a, 114b of each of the first and second retention tabs 113a and 113b, are locked at the inner surface of the tubular female coupling member 120, being retained both coupling members to each other in a "+" fashion such as is illustrated in Figure 6;

**[0041]** In the embodiment of Figure 6A, the retention tabs 113a and 113b being flexed inwardly of the inner surface of the side walls 111 a and 111 b of the tubular male coupling member 110, conversely to the embodiment illustrated in Figure 6;

**[0042]** In a seventh embodiment of the invention, illustrated in Figure 7, the snap coupling system between a tubular male coupling member, of a circular cross section, to be assembled in a "+" fashion with a tubular female coupling member, of a quadrangular cross section, of the present invention, this comprises:

a tubular male coupling member 130 of a circular cross section, having: a first end 131 a and a second end 131 b; a first slot 132a and a second slot 132b parallel to each other extending transversally at an intermediate portion of the tubular male coupling member 130, to approximately one third of the body of tubular male coupling member 130; a first and second retention tabs 133a and 133b (not illustrated) directed opposite to each other between the

slots 132a, 132b at the curved surface of the tubular male coupling member 130 and lifted in an angle outwardly of said tubular male coupling member 130, presenting a retention edge 134a and 134b (not illustrated);  
 a tubular female coupling member 140, to be coupled to the tubular male coupling member 130 in a "+" fashion, of a quadrangular cross section, having: an inner surface and an outer surface; a first end 141 a and a second end 141 b; a first side wall 142a and a second side wall 142b; and an upper wall 143a and a lower wall 143b; and a quadrangular cut 144 in its lower wall 143b in an intermediate portion of the tubular female coupling member 140, having the same width as the slots 132a and 132b of the tubular male coupling member 130;  
 wherein the first and second slots 132a and 132b, with its respective tabs 133a and 133b (not illustrated) of the tubular male coupling member 130, passing in a guided way through the edges of the side walls 142a and 142b of the quadrangular cut 144 of the tubular female coupling member 140 coupling in a "+" fashion in such a way that the retention edge 134a, 134b (not illustrated), of each of the first and second retention tabs 133a and 133b (not illustrated), are locked on the inner surface of the tubular female coupling member 140, being retained both coupling members to each other in a "+" fashion, such as is illustrated in Figure 7A.

**[0043]** In an eighth embodiment of the invention, illustrated in Figure 8, the snap coupling system between a tubular male coupling member, of a circular cross section, to be assembled in a "+" fashion with a tubular female coupling member, of a circular cross section, of the present invention, this comprises:

tubular male coupling member 150, of a circular cross section, having: a first end 151 a and a second end 151 b; a first tab 152a and a second tab 152b (not illustrated), opposed to each other at the curved surface of the tubular male coupling member 150, extending transversally at an intermediate portion of the tubular male coupling member 150, to about one third of the body of the tubular male coupling member 150 and lifted in an angle outwardly of said tubular male coupling member 150, each of which presenting a retention edge 153a and 153b (not illustrated);  
 a tubular female coupling member 160, of a circular cross section, to be coupled to the tubular male coupling member 150 in a "+" fashion, of a circular cross section, having: a first end 161 a and a second end 161 b; and a circular cut 162 at an intermediate portion of the tubular female coupling member 160, having the same width than the tabs 152a and 152b (not illustrated) of the tubular male coupling member 150;  
 wherein the first and second tabs 152a and 152b (not illustrated), with its respective retention edges 153a and 153b (not illustrated) of the tubular male coupling member 150 passing in a guided way through the lateral edges of the circular cut 162 of the tubular female coupling member 160 being coupled in a "+" fashion in such a way that the retention edge 153a, 153b (not illustrated), of each of the first and second retention tabs 152a, 152b (not illustrated), be locked at the inner surface of the circular cut 162 of the tubular female coupling member 160, being retained both coupling members to each other, in a "+" fashion as can be observed at Figure 8A.

**[0044]** A ninth embodiment of the snap coupling system between tubular coupling members, of a quadrangular cross section to be angularly coupled, in an any suitable angle, of the present invention, illustrated in Figures 9, 9A and 9B, this comprises:

a tubular male coupling member 170 of a quadrangular cross section, having a first end 171 a and a second end 171 b, the first end 171 a being cut in an angle to the second end 171 b; a first side wall 172a and a second side wall 172b shorter than the first side wall 172a; an upper wall 173a and a lower wall 173b, which are cut at the same angle than the first end 171 a; a first projection 174a extending from the first end 171 a of the first side wall 172a of the tubular male coupling member 170, said projection 174a including a retention tab 175a, cut therein directed to the second end 171b of said tubular male coupling member 170 and lifted in an angle outwardly of said tubular male coupling member 170, presenting a retention edge 176a; and a second projection 174b which is shorter than the first projection 174a, extending from the first end 171 a of the second side wall 172b of the tubular male coupling member 170, said projection 174b including a retention tab 175b cut therein, directed also to the second end 171 b of the tubular male coupling member 170, and lifted in an angle outwardly of said tubular male coupling member 170 presenting a retention edge 176b (not illustrated);  
 a tubular female coupling member 180, of a quadrangular cross section, to be angularly coupled to the tubular male coupling member 170, having: an inner wall and an outer wall; a first end 181 a and a second end 181 b; a first side wall 182a and a second end wall 182b; and an upper wall 183a and a lower wall 183b; a first and a second parallel transversal slots 184a, 184b, each of which extending vertically widthwise of the first side wall 182a of the tubular female coupling member 180, such as illustrated in Figure 9, wherein the distance between the first and second slots 184a and 184b is similar to the distance existing between the first and second projections 174a and 174b of the tubular male coupling member 170, such as it is illustrated in Figure 9;  
 wherein the first and second projections 174a and 174b being angularly defaced to each other, with their respective retention tabs 175a, 175b of the side walls 172a and 172b of the tubular male coupling member 170, passing in a

guided way through the first and second parallel transversal slots 184a, 184b of the first side wall 182a of the tubular female coupling member 180 in an angular way, such that the retention edge 176a, 176b (not illustrated) of each of the first and second retention tabs 175a and 195b of the projections 174a, 174b are locked at the inner surface of the first side wall 182a of the tubular female coupling member 180, being angularly retained both coupling members to each other, in accordance to the angle cut of the first end 171 a of the tubular male coupling member 170, such as it can be observed from Figure 9B.

**[0045]** In the embodiment illustrated in Figure 9A, the retention tabs 175a and 175b being flexed inwardly of the inner surface of the side walls 172a and 172b of the tubular male coupling member 170, conversely to the embodiment illustrated in Figure 9A.

**[0046]** Additionally, the tubular female coupling member 180, can include a pair of slots (not illustrated) in its side walls 182b to angularly coupling an additional tubular male coupling member, similar and opposite to the 170.

**[0047]** In a tenth embodiment of the snap coupling system between coupling members, illustrated in Figure 10, comprising tubular male coupling member, of a quadrangular cross section, having two retention tabs opposite to each other, lifted in an angle outwardly, and a tubular female coupling member of a quadrangular cross section, having a passing through retention aperture, to be assembled to each other in a "+" fashion, comprising:

A tubular male coupling member 190 of a quadrangular cross section, having: a first end 191 a and a second end 191 b; a first side wall 192a and a second side wall 192b; an upper wall 193a and a lower wall 193b; a first and a second retention tabs 194a, 194b (not illustrated) cut in the side walls 192a and 192b, at an intermediate portion of the tubular male coupling member 190, directed to the second end 191 b of said tubular male coupling member 190, and lifted in an angle outwardly of said tubular male coupling member 190, presenting a retention edge 195a, 195b (not illustrated); and a third and a fourth retention tabs 194c and 194d (not illustrated) at an intermediate portion of the tubular male coupling member 190, at the same height than the tabs a194a and 194b, but directed to the first end 191 a of said tubular male coupling member 190 and lifted in an angle outwardly of said tubular male coupling member 190, presenting a retention edge 195c, 195d (not illustrated), opposite to the first and second retention tabs 194a, 194b, cut at the upper and lower walls 193a and 193b of the tubular male coupling member 190; and a tubular female coupling member 200, of a quadrangular cross section, having a first end 201 a and a second end 201 b; an upper wall 202a and a lower wall 202b; a first and a second side walls 203a and 203b; and a passing through retention aperture 204, of a quadrangular cross section, at each of the upper and lower walls 202a and 202b, at an intermediate portion of the tubular female coupling member 200, through which aperture 204 passing the tubular male coupling member 190 by passing the tabs 194a a94b, 194c and 194d trough said aperture 204 to be locked at the interior thereof, assembling to each other in a "+" fashion.

**[0048]** In a variation of this tenth embodiment, illustrated in Figure 10A, each retention tab of the tubular male coupling member 190, comprising a first retention tab LR1 starting from an intermediate PI of one of its walls 192a, 192b, 193a, 193b, directed to the first end 191 a of the tubular male coupling member 190, and a second retention tab LR2 starting of the same intermediate portion PI of the same wall as the retention tab LR1, but directed to the end 191 b of the tubular male coupling member 190; both retention tabs LR1 and LR2 being distributed at an space similar to the cross section of the tubular female coupling member 200, such that on passing the tubular male coupling member between the passing through the quadrangular retention aperture 204 of the tubular female coupling member 200, each tab LR1 and LR2 being bilaterally locked both to the first end 191 a, as to the second end 191 b of the tubular male coupling member 190.

**[0049]** Also in this embodiment, it is possible to include a single tab in one sense and the other in an opposite sense, depending of the strength and stability which it is desired for the coupling system.

**[0050]** In an eleventh embodiment of the snap coupling system for using with a plurality of tubular coupling members, of quadrangular cross section, to be assembled in a fence or gate, of the present invention, illustrated in Figures 11, 11A and 11 B, comprising:

at least a tubular male coupling member 210, of a quadrangular cross section, having: a first end 211a and a second end 211 b; a first side wall 212a and a second side wall 212b; a front wall 213a and a rear wall 213b (not illustrated); a first and a second retention tabs 214a, 214b cut in the side walls 212a and 212b directed to the second end 211 b of said tubular male coupling member 210 and lifted in an angle outwardly of said tubular male coupling member 210, presenting a retention edge 215a, 215b; and a third and four retention tabs 216a and 216b opposite to the first and second retention tabs 214a, 214b, spaced to each other at a selected distance, cut at the same side walls 212a and 121 b, directed to the first end 211a of said tubular male coupling member 210, lifted in an angle outwardly of said tubular male coupling member 210, presenting a retention edge 217a and 217b, respectively, directed to the first end 212a of the tubular male coupling member 210 and lifted at an angle outwardly of said tubular male coupling member 210;

at least two tubular female coupling member 220a, 220b of a quadrangular cross section, which are retained by retention posts PR1, PR2 (Figure 11A) to which at least a tubular male coupling member 210 is coupled, to be maintained coupled avoiding that these tubular female coupling members could become detached, forming a fence or gate, each of the tubular female coupling members 220a and 220b has: a first end 221 a and a second end 221 b; a first and second lateral walls 222a and 222b (not illustrated); and an upper wall 223a and a lower wall 223b; at least two transversal apertures 224 extending horizontally crossing the upper and lower walls 223a and 223b of each tubular female coupling member 220a, 220b, spaced at a selected distance similar to that of the retention tabs 214a, 214b, 216a and 216b of the tubular male coupling member 210, such as it is illustrated in Figures 11 and 11 A; wherein the first and second retention tabs 214a, 214b of the side walls 212a and 212b of the tubular male coupling member 210, passing in a guided way through the first and second transversal apertures 224 of the upper and lower walls 223a and 223b (not illustrated) of the tubular female coupling member 220a and 220b, in such a way that the retention edge 215a, 215b of each of the first and second retention tabs 214a and 214b, of the side walls 212a and 212b of the tubular male coupling member 210, be locked on the upper surface of the upper wall 223a of the tubular female coupling member 220, in such a way that prevents that the tubular male coupling member 210 be detached or retires by its lower end 211b; and the third and fourth retention tabs 216a and 216b of the side walls 212a and 212b of the tubular male coupling member 210, passing in a guided way through the aperture 224 of the upper and lower walls 223a and 223b of the tubular female coupling member 220, in such a way that the retention edge 217a, 217b of each of the third and fourth retention tabs 216a and 216b, of the side walls 212a and 212b of the tubular male coupling member 210 be locked on the lower surface of the lower wall 223b (not illustrated) of the tubular female coupling member 220b, in such a way that prevents that the tubular male coupling member 210 be detached by its upper end 211a, such as it is observed from Figures 11 and 11A.

**[0051]** In another embodiment of the tubular male coupling members 210, as it is illustrated in Figure 11 B, each of the tubular male coupling member 210, has a retention tab 214a, 216b with its retention edge 215a, 217b, directed to the first end 211a, in its first side wall 212a and a retention wall 214a, 216b, with its retention edge 215a, 217b, in its second side wall 212b, but directed to the second end 211 b, in such a way that each of the tubular male coupling members being retained in both senses by its respective intermediate parts.

**[0052]** It should be understood that in all embodiments formerly described, when coupling the tubular male coupling member with the tubular female coupling member, the retention tabs of the tubular male coupling member are momentarily flexed to allow the tabs passing through the slots of the tubular female coupling member and then, on completely entering the tubular male coupling member into the tubular female coupling member, the tabs recover its position so that its retention edge be locked at the interior of the tubular female coupling member.

**[0053]** It should be additionally understood that the fence or gate assembled in accordance to the formerly described, can comprise a plurality of tubular male coupling members and tubular female coupling members, under the condition that include the tabs and slots corresponding to the number of coupling members.

**[0054]** Furthermore, in the embodiment of Figure 10, the tubular female coupling members can be solid of quadrangular or rectangular cross section, as may be the cross section form of the tubular male coupling member.

**[0055]** Additionally, both tubular male and female coupling members can have a circular cross section.

**[0056]** Also, as should be evident from the analysis of the tubular female coupling members, of the present invention, all of them present at least a flat or curved surface, with its coupling slots at a unique surface, without the rest of the surrounding walls, which could be only a single flat or curved wall.

**[0057]** All of these embodiments could be visualized from the following Table 1 of embodiments

TABLE 1

Cross Section of the tubular male coupling, member	Cross Section of the tubular female coupling member	Coupling Type	Figures No.	Embodiment
Quadrangular	Quadrangular	"T"	1, 1A, 1B, 1C, 1D	First
Quadrangular	Quadrangular	"+"	2, 2A, 2B	Second
Quadrangular	Circular	"T"	3, 3A, 3B	Third
Circular	Circular	"T"	4, 4A, 4B	Fourth
Circular	Quadrangular	"T"	5, 5A, 5B	Fifth
Quadrangular	Circular	"+"	6, 6A, 6B	Sixth
Circular	Quadrangular	"+"	7, 7A	Seventh

(continued)

Cross Section of the tubular male coupling, member	Cross Section of the tubular female coupling member	Coupling Type	Figures No.	Embodiment
Circular	Circular	"+"	8, 8A	Eight
Quadrangular	Quadrangular	<b>Angular</b>	9, 9A, 9B	Ninth
Quadrangular	Quadrangular	"+"	10, 10A, 10B	Tenth
Quadrangular	Quadrangular	<b>Fence or Gate</b>	11, 11A	Eleventh

**[0058]** The unions referred at the specific embodiments can support a high amount of weight, which give opportunity of apply them in diverse situations.

**[0059]** It should be finally understand that the snap coupling system between metallic or non-metallic tubular coupling members, of the present invention, is not limited to the embodiments formerly described and that the persons skilled in the art will be able, by the teachings herein disclosed, to carry out changes in the snap coupling system between tubular coupling members, of the present invention, which will be within the true scope of the invention, which will be set forth exclusively by the following claims.

## Claims

1. A snap coupling system between coupling members comprising:

a male coupling member having: a first end and a second end and at least a surrounding wall; at least a retention tab at a coupling surface of the surrounding wall, lifted in an angle with respect to a surface of the surrounding wall; having a retention edge; and

a female coupling member, having: at least one wall having at least one slot or opening formed in the wall of the female coupling member, in a middle portion thereof, allowing the retention tab of the male coupling member to momentarily flex in order to tightly pass through the slot or opening and get back to its position in order to retain a retention edge of the retention tab, against an edge of the slot or opening for coupling the male coupling member and the female coupling member in a "T", cross ("+") or angular fashion.

2. The snap coupling system as claimed in claim 1, wherein the male and female coupling members are tubular.

3. The snap coupling system as claimed in claim 1 and 2, wherein the male and female coupling members are tubular and have a polygonal shaped cross section.

4. The snap coupling system as claimed in claim 1 and 2, wherein the male and female coupling members are tubular and have a circular shaped cross section.

5. The snap coupling system as claimed in claim 1 and 2, wherein the tubular male coupling member has a polygonal shaped cross section and the tubular female cross section has a circular shaped cross section.

6. The snap coupling system as claimed in claim 1 and 2, wherein the tubular male coupling member has a circular shaped cross section and the tubular female cross section has a polygonal shaped cross section.

7. The snap coupling system as claimed in claim 1, wherein the female coupling member is planar or curved.

8. The snap coupling system as claimed in claim 1 and 3, wherein the tubular male coupling member of a quadrangular shaped cross section and coupled in a "T" fashion with a tubular female coupling member of a quadrangular shaped cross section comprising:

a first and a second end; a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first projection extending from the first end of the first lateral wall of the tubular male coupling member, said projection including a retention tab cut thereof, directed toward the second end of said tubular male coupling member and raised at an angle outwardly or inwardly from said tubular male coupling member, having a retention edge.

9. The snap coupling system as claimed in claim 1 and 3 wherein the tubular male coupling member of a quadrangular shaped cross section and coupled in a "T" fashion with a tubular female coupling member of a quadrangular shaped cross section comprising:

a first and a second end; a first lateral wall and a second lateral wall; a superior wall and an inferior wall; two retention tabs raised at an angle outwardly of said tubular male coupling member, each one located at each respective lateral wall of the first end of the tubular male coupling member, to be locked on edges of a quadrangular aperture of a tubular female coupling member.

10. The snap coupling system as claimed in claim 1 and 3 wherein the tubular male coupling member of a quadrangular shaped cross section and coupled in a "T" fashion with a tubular female coupling member of a quadrangular shaped cross section further comprising:

two additional retention tabs located at the same height of the tabs of the lateral walls, each one located at each respective superior and inferior walls, in the same first end of the tubular male coupling device.

11. The snap coupling system as claimed in claim 1 and 3 wherein the tubular male coupling member of a quadrangular shaped cross section and coupled in a "T" fashion with a tubular female coupling member of a quadrangular shaped cross section, further comprising:

a first and a second end, the first end is cut at an angle towards the second end; a first lateral wall and a second lateral wall, shorter than the first lateral wall; a superior wall and an inferior wall, cut at the same angle that the first end; a first projection extending from the first end of the first lateral wall of the tubular male coupling member, said projection including a retention tab cut in it, directed towards the second end of said tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge; and a second projection shorter than the first projection, extending from the first end of the second lateral wall of the tubular male coupling member, said projection having a retention tab cut in it, directed also towards the second end of the tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge.

12. The snap coupling system as claimed in claim 1 and 3 and 11, wherein the retention tabs are angularly directed inwardly from the tubular male coupling member.

13. The snap coupling system as claimed in claim 1 and 3 wherein the tubular male coupling member of a quadrangular shaped cross section and coupled in a cross "+" fashion with a tubular female coupling member of a quadrangular shaped cross section, further comprising:

a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first and a second parallel slots, both transversely cut in an intermediate portion of the lateral walls, each extending from an edge of the inferior wall toward the superior wall; a first retention tab and a second retention tab, both cut between the slots at each lateral wall, extending from the inferior wall toward the superior wall, each having a retention edge respectively.

14. The snap coupling system as claimed in claim 1 and 3 wherein the tubular male coupling member of a quadrangular shaped cross section and coupled in a cross "+" fashion with a tubular female coupling member of a quadrangular shaped cross section, further comprising:

a first end and a second end; a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first and a second retention tab cut in the lateral walls, at an intermediate portion of the tubular male coupling member, directed toward the second end of said tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge; and a third and a fourth retention tabs at an intermediate portion of the tubular male coupling member, at the same height than the first and the second tabs of the lateral walls, directed toward the first end of said male tubular coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge, opposed to the first and second retention tabs, cut in the superior and inferior walls of the tubular male coupling member.

15. The snap coupling system as claimed in claim 1, 3 and 14 wherein each retention tab of the tubular male coupling member of a quadrangular shaped cross section and coupled in a cross "+" fashion with a tubular female coupling

member of a quadrangular shaped cross section, further comprising:

a first retention tab extending from an intermediate portion of one of the walls of the tubular male coupling member, directed towards the first end of the tubular male coupling member, and a second retention tab extending from the same intermediate portion of the same wall of the first retention tab but directed towards the second end of the tubular male coupling member; both retention tabs being distributed in a space similar to that of the cross section of the tubular female coupling member.

**16.** The snap coupling system as claimed in claim 1, 3 and 15 wherein each one of the walls of the tubular male coupling member, comprising a first and a second retention tabs opposite each other.

**17.** The snap coupling system as claimed in claim 1 and 5 wherein each retention tab of the tubular male coupling member of a quadrangular shaped cross section and coupled in a cross "+" fashion with a tubular female coupling member of a circular shaped cross section, further comprising:

a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first tab and a second tab, parallel each other, both transversely cut in an intermediate portion of the lateral walls, extending from the edge of the superior wall toward the inferior wall, having a retention edge, respectively, and a quadrangular cut in the superior wall, located above the first and second tabs, to allow the entry of the tubular female coupling member in the tubular male coupling member through said quadrangular cut.

**18.** The snap coupling system as claimed in claim 1 and 6 wherein the tubular male coupling member of a circular shaped cross section and coupled in a cross "+" fashion with a tubular female coupling member of a quadrangular shaped cross section, comprising:

a first end and a second end; a first projection extending from the first end of the of the tubular male coupling member, said projection including a retention tab, cut in the same, directed toward the second end of the tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge and a second projection extending from the first end of the tubular male coupling member, opposite the first projection, said second projection including a retention tab cut in the same, directed also towards the second end of the tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge.

**19.** The snap coupling system as claimed in claim 1 and 6 wherein the tubular male coupling member of a circular shaped cross section and coupled in a cross "+" fashion with a tubular female coupling member of a quadrangular shaped cross section, comprising:

a first and a second end; a first slot and a second slot, parallel to each other, transversally extending at an intermediate portion of the tubular male coupling member, to about a third of the body of the tubular male coupling member; a first and a second retention tabs opposite each other, between the slots, on the curved surface of the tubular male coupling member, raised at an angle outwardly from said tubular male coupling member, each having a retention edge.

**20.** The snap coupling system as claimed in claim 1 and 4, wherein the tubular male coupling member of a circular shaped cross section and coupled in a cross "+" fashion with a tubular female coupling member of a circular shaped cross section, comprising:

a first and a second end; a first slot and a second slot, opposite to each other, on the curved surface of the tubular male coupling member, transversally extending at an intermediate portion of the tubular male coupling member, to about one third of the body of the tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, each having a retention edge.

**21.** The snap coupling system as claimed in claim 1, 3 and 8, wherein the tubular female coupling member of a quadrangular shaped cross section and coupled in a "T" fashion with a tubular male coupling member of a quadrangular shaped cross section, comprising:

a first end and a second end; a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first and a second parallel transversal slots, each extending vertically across the width of the first lateral wall

of the tubular female coupling member, wherein the distance between the first and second slots is similar to the distance between the first and second projections of the tubular male coupling member.

22. The snap coupling system as claimed in claim 1 and 3, wherein the tubular female coupling member of a quadrangular shaped cross section and coupled in a "T" fashion with a tubular male coupling member of a quadrangular shaped cross section, comprising:

a first and a second end; a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a quadrangular retention aperture at an intermediate portion of a lateral wall of the tubular female coupling member, to be assembled with a tubular male coupling member in a "T" fashion.

23. The snap coupling system as claimed in claim 1 and 3 wherein the tubular female coupling member of a quadrangular shaped cross section and coupled in a cross "+" fashion with a tubular male coupling member of a quadrangular shaped cross section, comprising:

a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first transversal slot and a second transversal slot parallel to each other, each vertically extending from the superior wall, toward the inferior wall, cut in the lateral walls; and a rectangular cut at the superior wall, for allowing the entry of a tubular male coupling member of a quadrangular shaped cross section, between the slots, in such way that the retention edges of the retention tabs of said tubular male coupling member, are locked against the edges of the superior wall, to the sides of the rectangular cut, thus leaving said tubular male coupling member coupled with the tubular female coupling member in a cross "+" fashion.

24. The snap coupling system as claimed in claim 1,3, and 23, wherein the tubular female coupling member of a quadrangular shaped cross section and coupled in a cross "+" fashion with a tubular male coupling member of a quadrangular shaped cross section, comprising:

a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first transversal slot and a second transversal slot, parallel to each other, each one vertically extending from the superior wall, toward the inferior wall, and cut in the lateral walls; a first retention tab and a second retention tab, both cut between the slots, into each lateral wall, extending from the edge of the inferior wall toward the superior wall, for allowing the entry of said tubular male coupling member of a quadrangular shaped cross section, between the slots, thus leaving said tubular male coupling member of a quadrangular shaped cross section firmly coupled to the tubular female coupling member in a cross "+" fashion.

25. The snap coupling system as claimed in claim 1,6 and 18, wherein the tubular female coupling member of a quadrangular shaped cross section and coupled in "T" fashion with a tubular male coupling member of a circular shaped cross section, comprising:

a first end and a second end; a first lateral wall and a second lateral wall, and a superior wall and an inferior wall, each having an internal surface and an external surface; a first and a second parallel transversal slots, having a curvature towards the ends, similar to the one of the projections of the tubular male coupling section having a circular shaped cross section, aligned to the same height between each other from an intermediate portion of the tubular female coupling member, each one extends vertically along the width of the wall of the tubular female coupling member, wherein the distance between the first and second slots is similar to the distance between first and second projections of said tubular male coupling member having a circular shaped cross section.

26. The snap coupling system as claimed in claim 1,6, and 19, wherein the tubular female coupling member of a quadrangular shaped cross section and coupled in a cross "+" fashion with a tubular male coupling member of a circular shaped cross section, comprising:

a first end and a second end; a first lateral wall and a second lateral wall, and a superior wall and an inferior wall, each one having an internal surface and an external surface; and a quadrangular cut in its inferior wall, at an intermediate portion of the tubular female coupling member, having the same width than the slots of said tubular male coupling member of a circular shaped cross section.

27. The snap coupling system as claimed in claim 1 and 5, wherein the tubular female coupling member of a circular



shaped cross section and coupled in "T" fashion with a tubular male coupling member of a quadrangular shaped cross section, comprising:

an internal surface and an external surface; a first end and a second end; a first and a second parallel transversal slot, aligned at the same height between each other, at an intermediate portion of the tubular female coupling member, each one extends vertically along the width of the wall of the tubular female coupling member, wherein the distance between the first and second slots is similar to the distance between the first and second projections of a tubular male coupling member, of a quadrangular shaped cross section.

**28.** The snap coupling system as claimed in claim 1, 4, and 20, wherein the tubular female coupling member of a circular shaped cross section and coupled in a cross "+" fashion with a tubular male coupling member of a circular shaped cross section, comprising:

a first end and a second end; and a circular cut at an intermediate portion of the tubular female coupling member, having the same width than the retention slots of a tubular of a tubular male coupling member, of a circular cross section.

**29.** The snap coupling system as claimed in claim 1 and 26, wherein each tab having a slot at an end central portion thereof for inserting a tool trough the same and facilitating the flexing of the tab until a desired position.

**30.** The snap coupling system between tubular coupling members of a quadrangular shaped cross section to be assembled in a "T" fashion, in accordance with claims 1 and 3, comprising:

a tubular male coupling member of a quadrangular shaped cross section comprising: a first end and a second end; a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first projection extending from the first end of the first lateral wall of the tubular male coupling member, said first projection including a retention tab, cut in it, directed towards the second end of said tubular male coupling member and raised at an angle outwardly or inwardly from said tubular male coupling member, having a retention edge and a second projection extending from the first end of the second lateral wall of the tubular male coupling member, said second projection including a retention tab cut in it, also directed towards the second end of the tubular male coupling member and raised at an angle outwardly or inwardly from said tubular male coupling member, having a retention edge;

a tubular female coupling member, of a quadrangular shaped cross section, to be perpendicularly coupled to the tubular male coupling member in a "T" fashion, comprising: a first end and a second end; a first lateral wall and a second lateral wall, a superior wall and an inferior wall, each having an internal surface and an external surface; a first and a second parallel transversal slots, each extending vertically across the width of the first lateral wall of the tubular female coupling member, wherein the distance between the first and the second slots is similar to the distance between the first and second projections of the tubular male coupling member; wherein the first and second projections with its respective retention tabs of the lateral walls of the tubular male coupling member, pass perpendicularly trough the first and second parallel transversal slots of the first lateral wall of the tubular female coupling member in a guided way, momentarily flexing the tabs, and then recuperating their position, in such way that the retention edge of each of the first and second retention tabs of the projections, are locked on the internal surface of the first lateral wall of the tubular female coupling member, both coupling members being retained to each other.

**31.** The snap coupling system between tubular coupling members of a quadrangular shaped cross section to be assembled in a cross "+" fashion, in accordance with claims 1 and 3, comprising:

a tubular male coupling member of a quadrangular shaped cross section having: a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first slot and a second slot parallel to each other, both transversely cut in an intermediate portion of the lateral walls, extending from the edge of the inferior wall toward the superior wall; a first retention tab and a second retention tab, both cut between the slots, into each lateral wall, extending from the inferior wall toward the superior wall, having a retention edge, respectively; and

a tubular male coupling member, of a quadrangular shaped cross section, to be perpendicularly coupled to the tubular male coupling member in a cross "+" fashion, having: a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first transversal slot and a second transversal slot, parallel to each other, each vertically extending from the superior wall toward the inferior wall; and a quadrangular cut on the superior wall, for allowing the entry of the male tubular coupling member with its tabs momentarily flexed, between the

slots, in such way that the slots then recover its position and their retention edges are locked against the internal edges of the superior wall to the sides of the quadrangular cut, thus leaving the tubular male coupling member coupled to the tubular female coupling member in a cross "+" fashion.

5 **32.** The snap coupling system between tubular coupling members of a quadrangular shaped cross section to be assembled in a cross "+" fashion, in accordance with claims 1, 3 and 31, wherein the tubular male coupling member, further includes a quadrangular cut on its inferior wall, in such way that it can be tightly received on the tubular female coupling member in order to form a cross "+" shaped union between both tubular coupling members.

10 **33.** The snap coupling system between tubular coupling members of a quadrangular shaped cross section to be assembled in a cross "+" fashion, in accordance with claims 1, 3 and 31, wherein the tubular female coupling member may include, in addition to the slots and quadrangular cut, a first retention slot and a second retention slot, both cut in the slots, on each lateral wall, extending from the edge of the inferior wall toward the superior wall, having a retention edge, respectively, leaving in such way, the tubular male coupling member firmly coupled to the female coupling member in a cross "+" fashion.

15 **34.** The snap coupling system between tubular coupling members as claimed in claim 1 and 5, wherein the tubular male coupling member has a quadrangular shaped cross section, to be assembled in a "T" fashion to a tubular female coupling member, of a circular shaped cross section, comprising:

20 a tubular male coupling member of a quadrangular shaped cross section, comprising: a first end and a second end; a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first projection extending from the first end of the first lateral wall of the tubular male coupling member, said projection including a retention tab cut in the same, directed towards the second end of said tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge; and a second projection extending from the first end of the second lateral wall of the tubular male coupling member, said projection including a retention tab cut in the same, directed also towards the second end of the tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge; and a tubular female coupling member of a circular shaped cross section to be perpendicularly coupled to the tubular male coupling member of a quadrangular shaped cross section in a "T" fashion, comprising: an internal surface and an external surface; a first end and a second end; a first and a second parallel transversal slots, aligned at the same height to each other, of an intermediate portion of the tubular female coupling member, each one extending vertically across the width of the tubular female coupling member, wherein the distance between the first and second slots is similar to the distance between the first and second projections of the tubular male coupling member; the projections and its retention edges have its edge curved, to the same curvature as the tubular female coupling member; and wherein the first and second projections with their respective retention tabs of the lateral walls of the tubular male coupling member, pass perpendicularly in a guided way, with the tabs momentarily flexing, trough the first and second parallel transversal slots of the first lateral wall of the tubular female coupling member, in such way that as the tabs recuperate their position, their retention edge is locked on the internal surface of the tubular female coupling member, both coupling members being retained to each other in a "T" fashion.

25 **35.** The snap coupling system between tubular coupling members as claimed in claim 34, wherein the retention tabs are flexed inwardly to the internal surface of the lateral walls of the tubular male coupling member, inversely to the ones of the claim 34.

30 **36.** The coupling system between tubular coupling members as claimed in claims 1 and 4, wherein the tubular male coupling member, of a circular shaped cross section, to be assembled to a tubular female coupling member of circular shaped cross section in a "T" fashion comprising:

35 a tubular male coupling member of a circular shaped cross section comprising: a first end and a second end; a first projection extending from the first end of the tubular male coupling member, said projection including a retention tab, cut in the same, directed towards the second end of said tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge; and a second projection, opposite the first projection, extending from the first end of the tubular male coupling member, said second projection including a retention tab cut in the same, directed also towards the second end of the tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge; and

a tubular female coupling member of a circular shaped cross section to be perpendicularly coupled to the tubular male coupling member in a "T" fashion, comprising: an internal surface and an external surface, a first end and a second end; a first and a second parallel transversal slots, aligned at the same height between each other, at an intermediate portion of the tubular female coupling member, each one extending vertically across the width of the wall of the tubular female coupling member, wherein the distance between the first and second slots is similar to the distance between the first and second projections of the tubular male coupling member; the projections and their retention edges, have their edges curved, to the same curvature as the tubular female coupling member;

wherein the first and second projections with their respective retention tabs of the lateral walls of the tubular male coupling member, pass perpendicularly in a guided way, with the tabs momentarily flexing, through the first and second parallel transversal slots of the first lateral wall of the tubular female coupling member, in such way that as the tabs recuperate their position, their retention edge is locked on the internal surface of the tubular female coupling member, both coupling members being retained to each other in a "T" fashion.

**37.** The snap coupling system between tubular coupling members as claimed in claim 36, wherein the retention tabs are flexed inwardly to the internal surface of the tubular male coupling member.

**38.** The coupling system between tubular coupling members as claimed in claims 1 and 6, wherein the tubular male coupling member, of a circular shaped cross section, to be assembled to a tubular female coupling member of a quadrangular shaped cross section in a "T" fashion comprising:

a tubular male coupling member of a circular shaped cross section comprising: a first end and a second end; a first projection extending from the first end of the tubular male coupling member, said projection including a retention tab, cut in the same, directed towards the second end of said tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge; and a second projection, opposite the first projection in the same first end, extending from the first end of the tubular male coupling member, said second projection including a retention tab cut in the same, directed also towards the second end of the tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, having a retention edge; and

a tubular female coupling member of a quadrangular shaped cross section to be perpendicularly coupled to the tubular male coupling member in a "T" fashion, comprising: a first end and a second end; a first lateral wall and a second lateral wall and a superior wall and an inferior wall, each having an internal surface and an external surface; a first and a second parallel transversal slots, having a curvature towards the ends, similar to the one of the projections of the tubular male coupling member, aligned at the same height between each other, at an intermediate portion of the tubular female coupling member, each one extending vertically across the width of the wall of the tubular female coupling member, wherein the distance between the first and second slots is similar to the distance between the first and second projections of the tubular male coupling member; wherein the first and second projections with their respective retention tabs of the tubular male coupling member, pass perpendicularly in a guided way, with the tabs momentarily flexing, through the first and second parallel transversal slots of the tubular female coupling member, in such way that as the tabs recuperate their position, their retention edge is locked on the internal surface of the tubular female coupling member, both coupling members being retained to each other in a "T" fashion.

**39.** The snap coupling system between tubular coupling members as claimed in claim 38, wherein the retention tabs are flexed inwardly to the internal surface of the tubular male coupling member.

**40.** The coupling system between tubular coupling members as claimed in claims 1 and 5, wherein the tubular male coupling member, of a quadrangular shaped cross section, to be assembled to a tubular female coupling member of circular shaped cross section in a cross "+" fashion comprising:

a tubular male coupling member of a quadrangular shaped cross section comprising: a first lateral wall, a second lateral wall; a superior wall and an inferior wall; a first tab and a second tab parallel to each other, both transversely cut on an intermediate portion of the lateral walls, extending from the edge of the superior wall toward the inferior wall, having a retention edge, respectively; and a quadrangular aperture over the tabs for allowing the entry of the body of the tubular female coupling member;

a tubular female coupling member to be coupled to the tubular male coupling member in a cross "+" fashion, of a circular cross section, comprising: an internal surface and an external surface, a first end and a second end; a first and a second parallel transversal slots, aligned at the same height between each other, at an

intermediate portion of the tubular female coupling member, each one extending vertically across the width of the wall of the tubular female coupling member, wherein the distance between the first and second slots is similar to the distance between the first and second retention tabs of the tubular male coupling member; the retention edges of the retention tabs, having their edges curved, to the same curvature as the tubular female coupling member;

wherein the first and second retention tabs of the lateral walls of the tubular male coupling member, pass in a guided way, with the tabs momentarily flexing, through the first and second parallel transversal slots of the tubular female coupling member in a cross "+" fashion, in such way that as the tabs recuperate their position, their retention edge is locked on the internal surface of the tubular female coupling member, both coupling members being retained to each other in a cross "+" fashion.

**41.** The snap coupling system between tubular coupling members as claimed in claim 40, wherein the retention tabs are flexed inwardly to the internal surface of the lateral walls of the tubular male coupling member.

**42.** The snap coupling system between tubular coupling members as claimed in claims 1 and 6, wherein the tubular male coupling member, of a circular shaped cross section, to be assembled to a tubular female coupling member of a circular shaped cross section in a cross "+" fashion comprising:

a tubular male coupling member of a circular shaped cross section comprising: a first and a second end; a first slot and a second slot parallel to each other, both extending transversely on an intermediate portion of the tubular male coupling member, to about a third of the body of the tubular male coupling member; a first and a second retention tabs opposite to each other between the slots, on the curved surface of the tubular male coupling system and raised at an angle outwardly from said tubular male coupling member, having a retention edge;

a tubular female coupling member of a quadrangular shaped cross section, to be coupled to the tubular male coupling member of a circular shaped cross section, in a cross "+" fashion, comprising: a first end and a second end; a first lateral wall and a second lateral wall; a superior wall and an inferior wall, each having an internal surface and an external surface; and a quadrangular cut in its inferior wall, at an intermediate portion of the tubular female coupling member, having the same width than the slots of the tubular male coupling member;; wherein the first and second retention tabs of the tubular male coupling member, are momentarily flexed to pass, together with its respective slots in a guided way, through the edges of the lateral walls of the quadrangular cut of the tubular female coupling member, which is coupled in a cross "+" fashion, in such way that as the tabs recuperate their position, their retention edge is locked on the internal surface of the tubular female coupling member, both coupling members being retained to each other in a cross "+" fashion.

**43.** The snap coupling system between tubular coupling members as claimed in claims 1 and 4, wherein the tubular male coupling member, of a circular shaped cross section, to be assembled to a tubular female coupling member of circular shaped cross section in a cross "+" fashion comprising:

a tubular male coupling member of a circular shaped cross section comprising: a first and a second end; a first slot and a second slot opposite to each other in the curved surface of the tubular male coupling member, both extending transversely on an intermediate portion of the tubular male coupling member, to about a third of the body of the tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, each having a curved retention edge;

a tubular female coupling member of a circular shaped cross section, to be coupled to the tubular male coupling member of a circular shaped cross section, in a cross "+" fashion, comprising: a first end and a second end; a quadrangular cut at an intermediate portion of the tubular female coupling member, having the same width than the retention slots of the tubular male coupling member;

wherein the first and second retention tabs with their respective retention edges of the tubular male coupling member, pass in a guided way, with the tabs momentarily flexing, through the lateral edges of the circular cut of the tubular female coupling member, coupling in a cross "+" fashion, in such way that as the tabs recuperate their position, their retention edge is locked on the internal surface of the tubular female coupling member, both coupling members being retained to each other in a cross "+" fashion.

**44.** The snap coupling system between tubular coupling members of a quadrangular shaped cross section to be angularly assembled at any appropriate angle, in accordance with claims 1 and 3, comprising:

a tubular male coupling member of a quadrangular shaped cross section comprising: a first end and a second

end, the first end being cut at an angle towards the second end, with respect to the first end; a first lateral wall and a second lateral wall shorter than the first lateral wall; a superior wall and an inferior wall, which are cut to the same angle than the first end; a first projection extending from the first end of the first lateral wall of the tubular male coupling member, said projection including a retention tab, cut in the same and directed towards the second end of said tubular male coupling member and raised at an angle outwardly from said male tubular coupling member, having a retention edge; and a second projection shorter than the first projection, extending from the first end of the second lateral wall, of the tubular male coupling member, said projection including a retention tab cut in the same, also directed towards the second end of the tubular male coupling member, and raised at an angle outwardly from said tubular male coupling member, having a retention edge;

a tubular female coupling member having tubular female coupling member, to be angularly coupled to the tubular male coupling member of a quadrangular shaped cross section, having: a first end and a second end; a first lateral wall and a second lateral wall, and a superior wall and an inferior wall, each one having an internal surface and an external surface; a first and a second parallel transversal lateral slots, each one vertically extending across the width of the first lateral wall of the tubular female coupling member, wherein the distance between the first and second slots is similar to the distance between the first and second projections of the tubular male coupling member;

wherein the first and a second projection that are at an angle between each other, with their respective retention tabs of the lateral walls of the tubular male coupling member, pass at an angle in a guided way, with the tabs momentarily flexing, through the first and second parallel transversal slots of the first lateral wall of the tubular female coupling member, in such way that as the tabs recuperate their position, their retention edge is locked on the internal surface of the tubular female coupling member, both coupling members being angularly retained to each other in accordance with the cut angle of the first end of the tubular male coupling member.

45. The snap coupling system between tubular coupling members, in accordance with claim 44, wherein the retention slots are flexed inwardly to the internal surface of the lateral walls of the tubular male coupling member.

46. The snap coupling system between tubular coupling members, in accordance with claim 44, wherein the tubular female coupling member may include a pair of slots in its second lateral wall, in order to attach an additional tubular male coupling member opposite to the first one.

47. The snap coupling system as claimed in claim 1, wherein the female coupling member is planar or has a semicircular shaped cross section.

48. The snap coupling system between tubular coupling members in accordance with claims 1 and 3, for using with a plurality of tubular coupling members, of a quadrangular shaped cross section to be assembled in a fence comprising:

a tubular male coupling member of a quadrangular shaped cross section, having: a first end and a second end; a first lateral wall and a second lateral wall; a front wall and a rear wall; a first and a second retention slots cut in the side walls, directed toward the second end of the tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, each slot having a respective retention slot; and a third and a fourth retention slots opposite to the first and second retention slots, cut in the superior and inferior walls, directed toward the first end of said tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, each slot having a respective retention edge;

a tubular female coupling member of a quadrangular shaped cross section, comprising: a first end and a second end; a first and a second lateral walls; and a superior wall and an inferior wall; a passing quadrangular cut, crossing the superior and inferior walls of the tubular female coupling member, at an intermediate portion of the tubular female coupling member;

wherein the first, second, third and fourth retention tabs, of the lateral, superior and inferior walls of the tubular male coupling member, pass in a guided way, with the tabs momentarily flexing, through the quadrangular cut of the tubular female coupling member, in such way that as the tabs recuperate their position, their retention edge is locked on the internal surface of the quadrangular cut of the tubular female coupling member, in such way that it is avoided that the tubular male coupling member is detached or retired upwardly or downwardly.

49. The snap coupling system between tubular coupling members in accordance with claims 1 and 3, for using with a plurality of tubular coupling members, of a quadrangular shaped cross section to be assembled in a fence comprising:

a tubular male coupling member of a quadrangular shaped cross section, having: a first end and a second end; a first lateral wall and a second lateral wall; a superior wall and an inferior wall; a first retention slot directed

towards the first end and a second retention slot directed towards the second end of the tubular male coupling member, cut in each of its lateral, superior and inferior walls, each having a respective retention slot; and a tubular female coupling member of a quadrangular shaped cross section, to be coupled to the tubular male coupling member and remain anchored, avoiding that it could be detached from the tubular female coupling member, comprising: a first end and a second end; a first and a second lateral wall; and a superior and inferior wall; and a passing cut, crossing the superior and inferior walls of the tubular female coupling member, through which pass the retention slots of the tubular male coupling member, momentarily flexing to be retained on the internal surfaces of the quadrangular cut when the tabs recuperate their position.

- 50.** The snap coupling system between tubular coupling members in accordance with claims 1 and 3, for using with a plurality of tubular coupling members, of a quadrangular shaped cross section to be assembled in a fence comprising:

a tubular male coupling member of a quadrangular shaped cross section, having: a first end and a second end; a first lateral wall and a second lateral wall; a front wall and a rear wall; a first and a second retention slots cut in the side walls, directed toward the second end of the tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, each slot having a respective retention slot; and a third and a fourth retention slots opposite to the first and second retention slots, spaced between each other at a selected distance cut in the same lateral walls, directed toward the first end of said tubular male coupling member and raised at an angle outwardly from said tubular male coupling member, each slot having a respective retention edge;

at least two tubular female coupling members of a quadrangular shaped cross section, being retained by retention posts, to which at least one tubular female coupling member is attached to be anchored, avoiding that said tubular female coupling members be detached, thus forming a fence, each one of the tubular female coupling members having: a first end and a second end; a first and a second lateral wall; and a superior and inferior wall; a first quadrangular cut, extending horizontally, crossing the superior and inferior walls of the tubular female coupling member, and a second quadrangular cut, extending horizontally, crossing the superior and inferior walls of the tubular female coupling member, spaced at a selected distance, similar to the one of the retention slots of the tubular male coupling member;

wherein the first and second retention tabs, of the lateral, walls of the tubular male coupling member, pass in a guided way, with the tabs momentarily flexing, trough the first and second quadrangular cut of the superior and inferior walls of the tubular female coupling member, in such way that as the tabs recuperate their position, their retention edge is locked on the superior surface of the superior wall of the tubular female coupling member, in such way that it is avoided that the tubular male coupling member is detached or retired by its inferior end; and the third and fourth retention tabs of the lateral walls of the tubular male coupling member, pass in a guided way, trough the second quadrangular cut of the superior and inferior walls of the tubular female coupling member, in such way that the retention tab, of each third and fourth retention tab, of the lateral walls of the tubular coupling male member, is locked on the inferior surface of the inferior wall of the tubular female coupling member, in such way that it is avoided that the tubular male coupling member is detached by its superior end.

- 51.** The snap coupling system between tubular coupling members in accordance with claim 50, wherein each one of the tubular male coupling members, have at least a retention tab with its retention edge, in its first lateral wall, directed towards the first end of the tubular male coupling member, and at least a retention tab, with its retention edge in its second lateral wall, but directed towards the second end of the tubular male coupling member, in such way that each of the tubular male coupling members are retained in both directions by its respective intermediate parts.

- 52.** The snap coupling system between tubular coupling members in accordance with claims 50 and 51, wherein the assembled fence may comprise a plurality of tubular male coupling members and tubular female coupling members that include tabs and slots correspondent to the number of coupling members.

- 53.** The snap coupling system between tubular coupling members in accordance with claims 50 and 51, wherein the tubular female coupling members are solid and have a quadrangular o rectangular shaped cross section in accordance with the shape of the cross section of the tubular male coupling member.

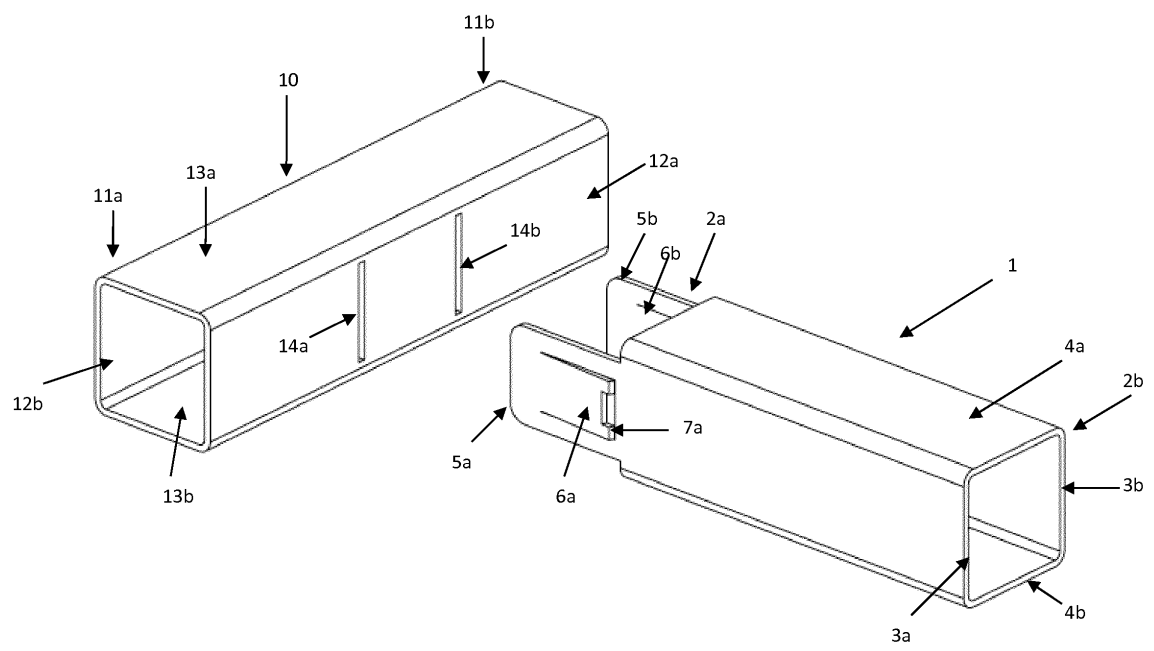


FIGURE 1

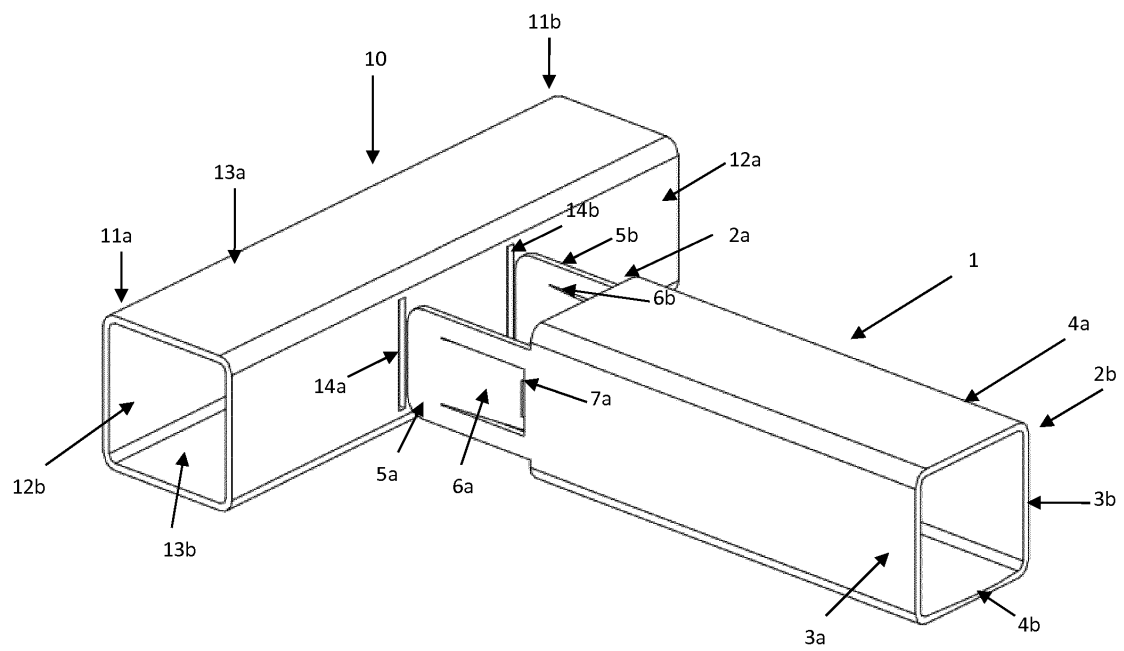


FIGURE 1A



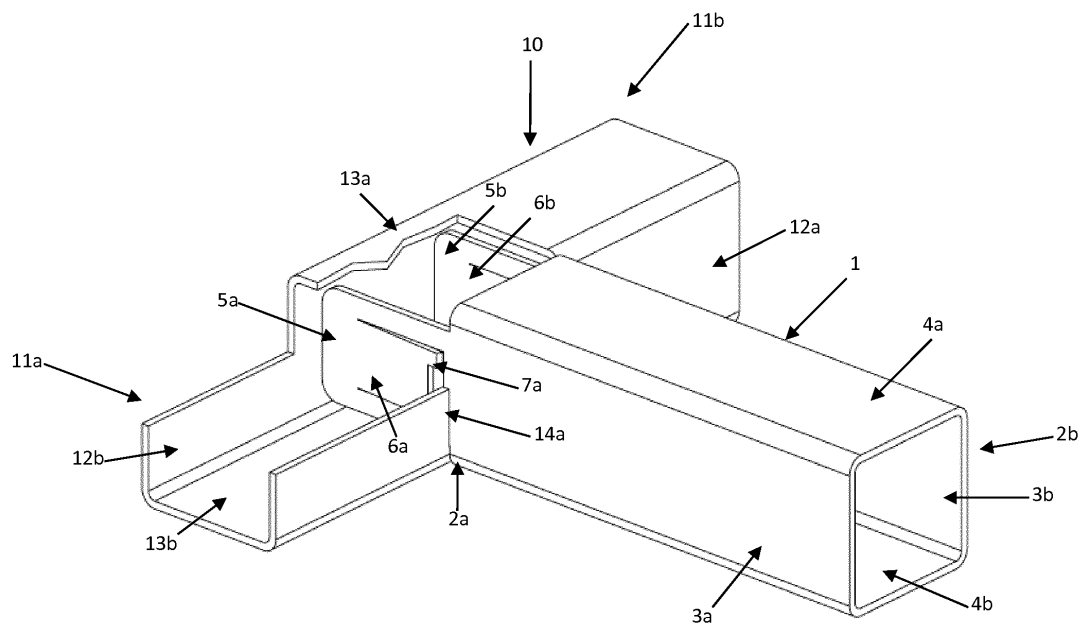


FIGURE 1B

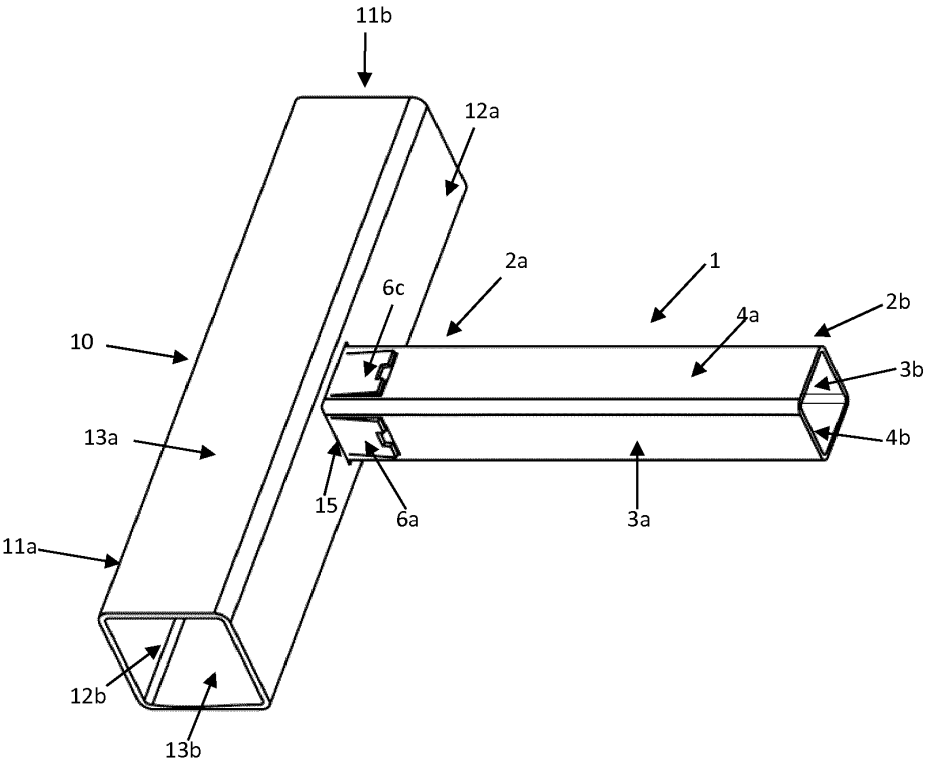


FIGURE 1C

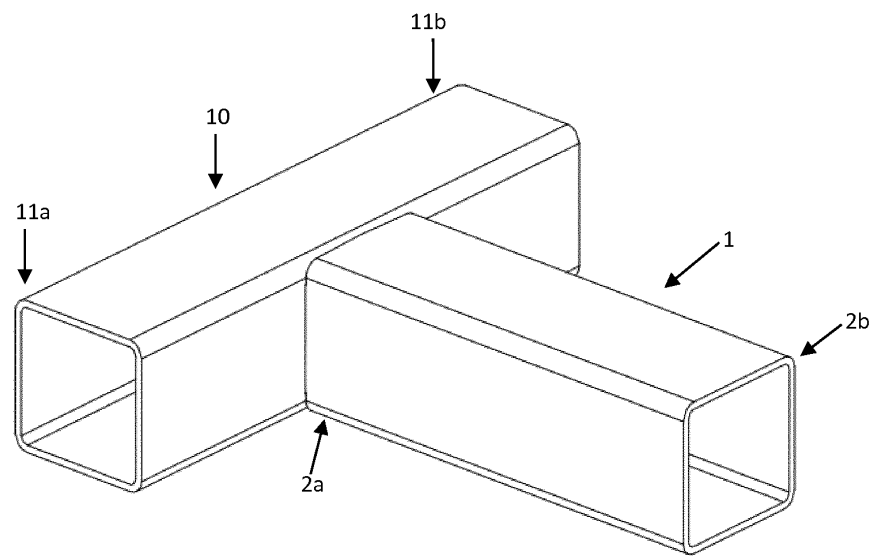


FIGURE 1D

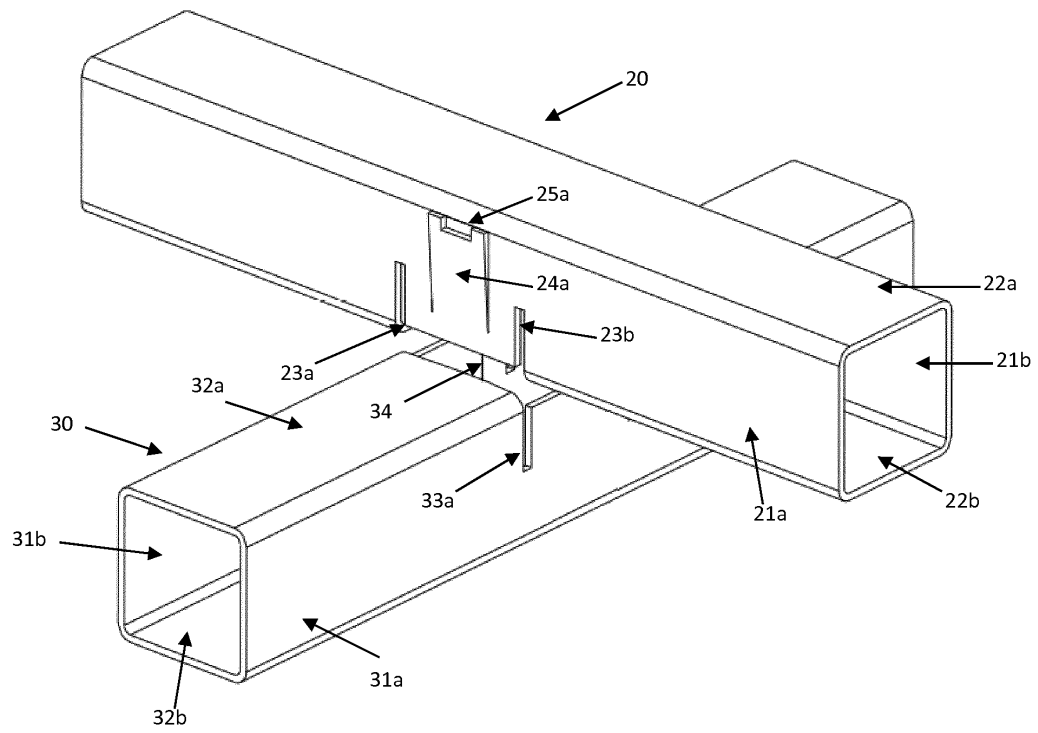


FIGURE 2

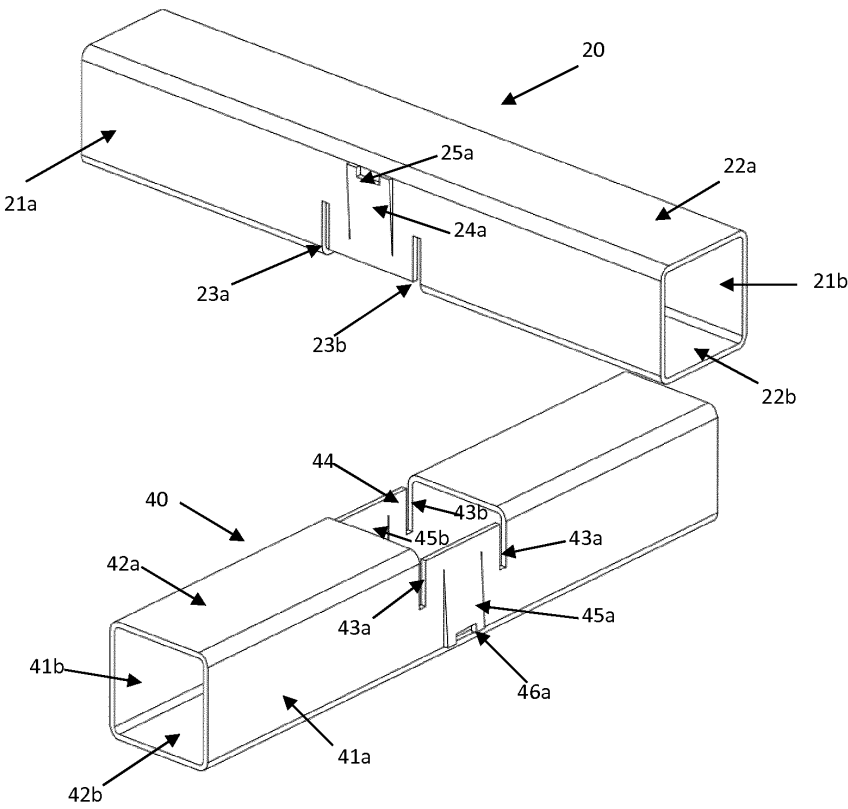


FIGURE 2A

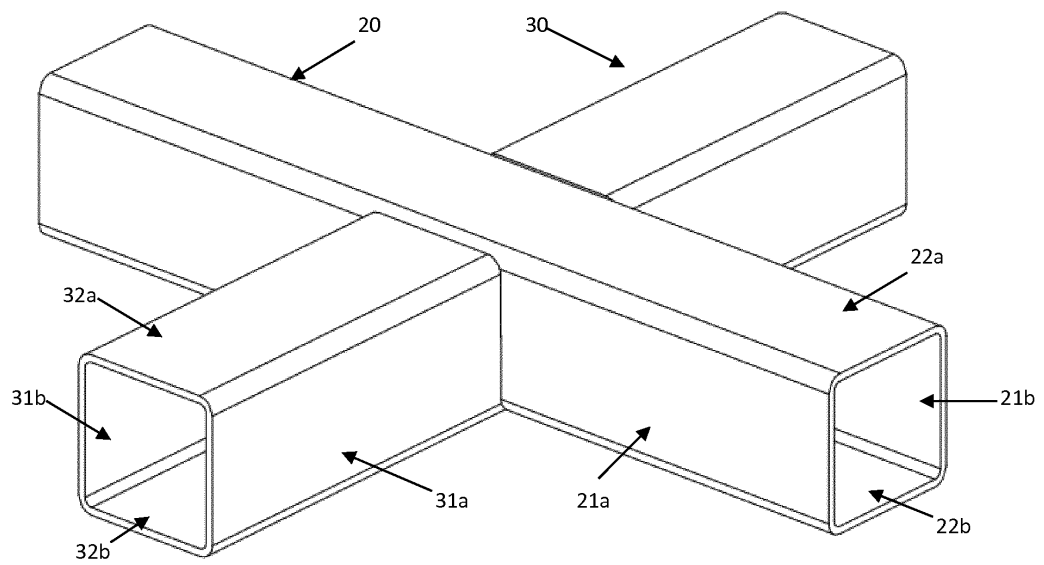


FIGURE 2B

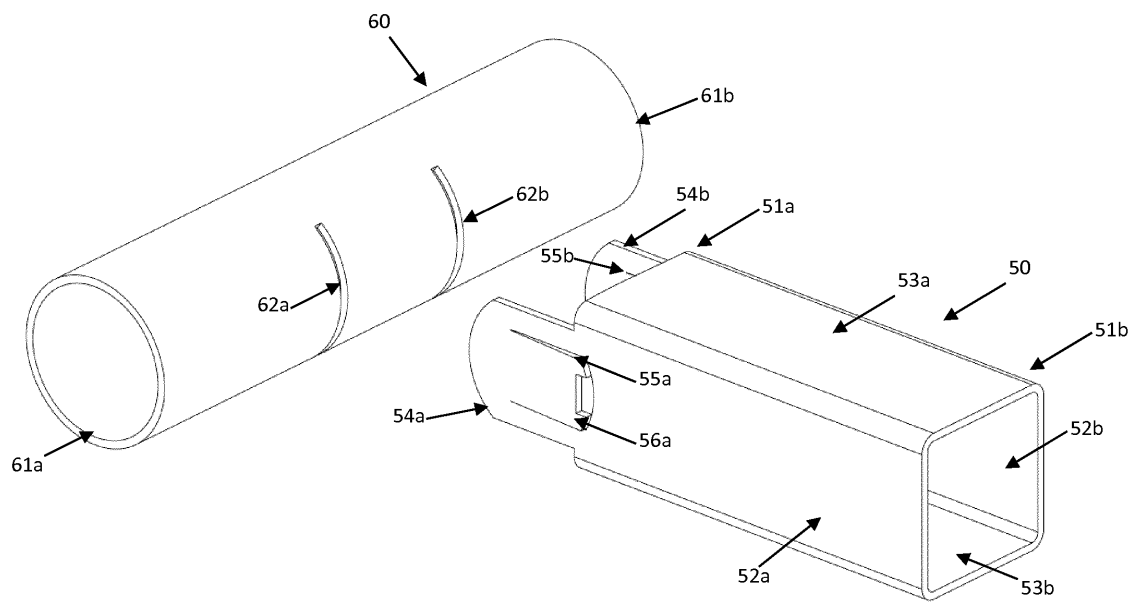


FIGURE 3

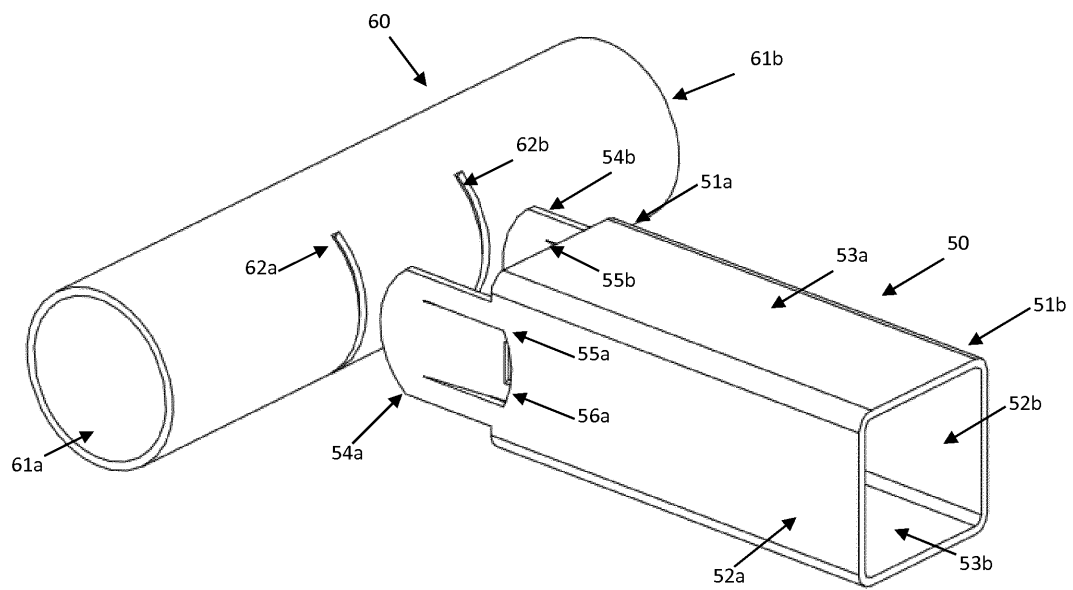


FIGURE 3A



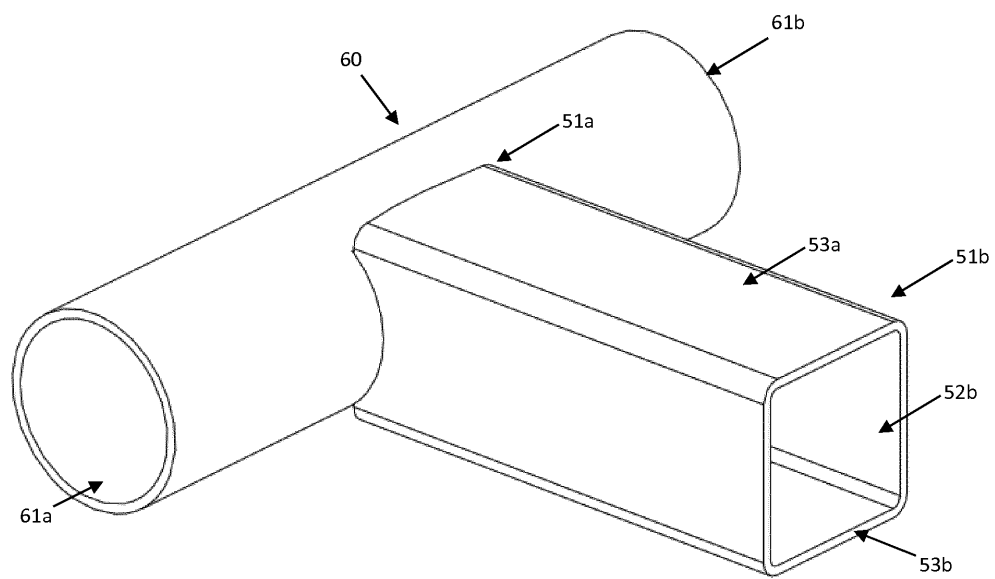


FIGURE 3B

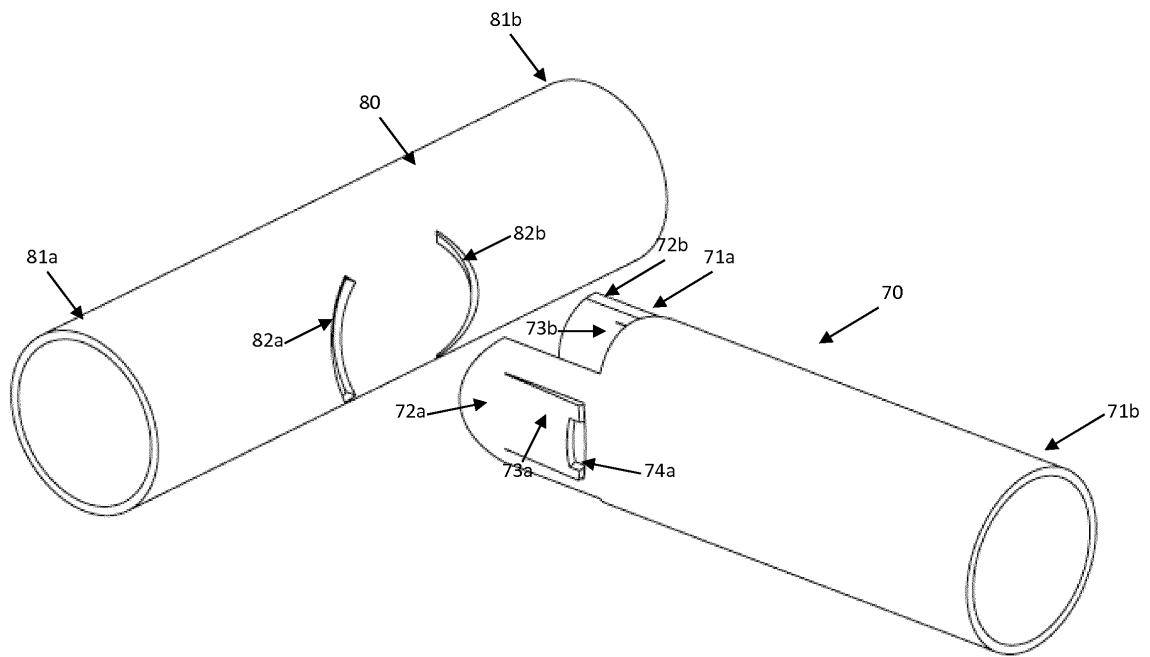


FIGURE 4

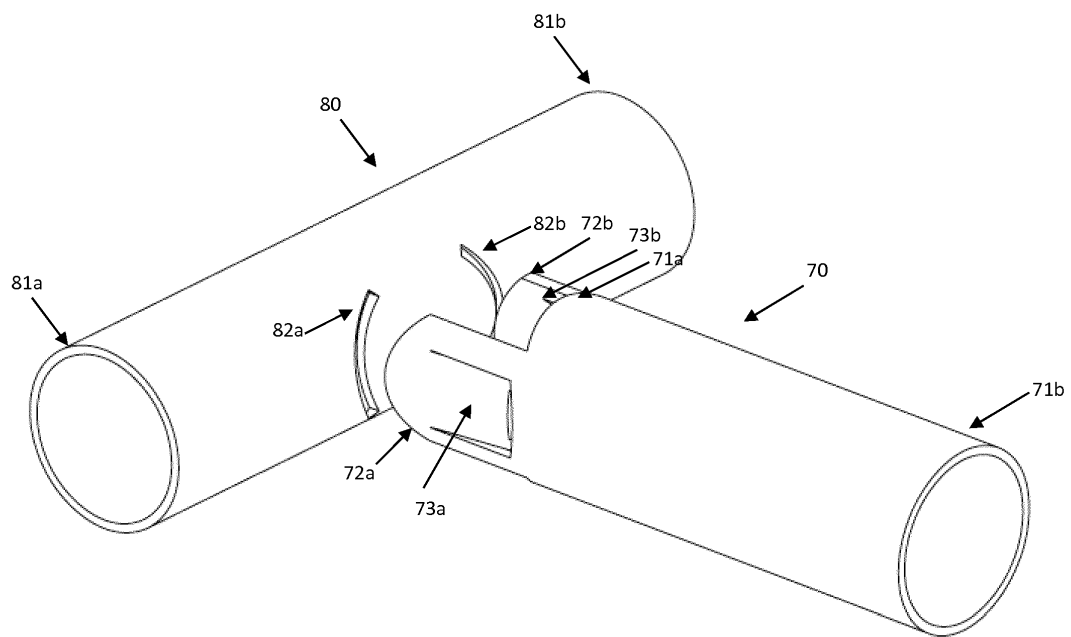


FIGURE 4A

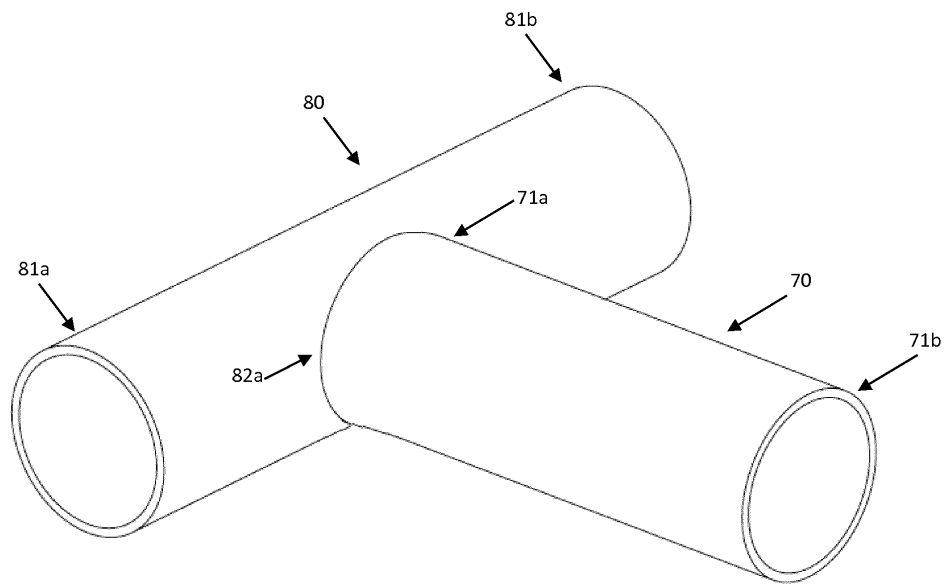


FIGURE 4B

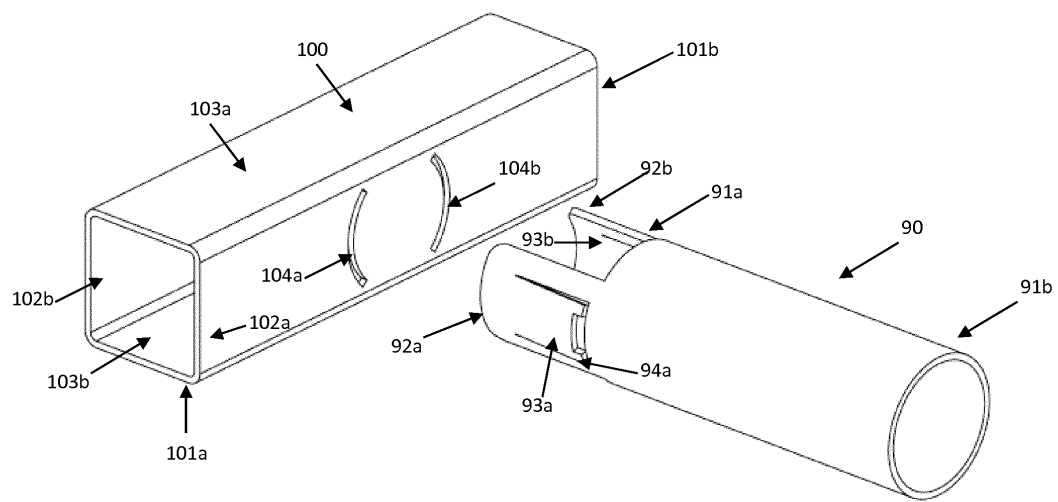


FIGURE 5

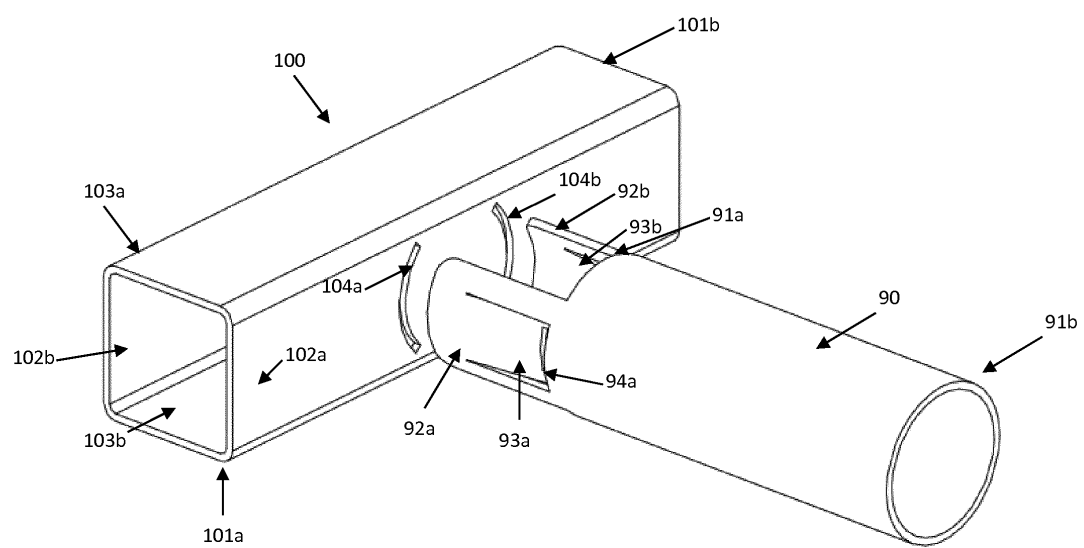


FIGURE 5A

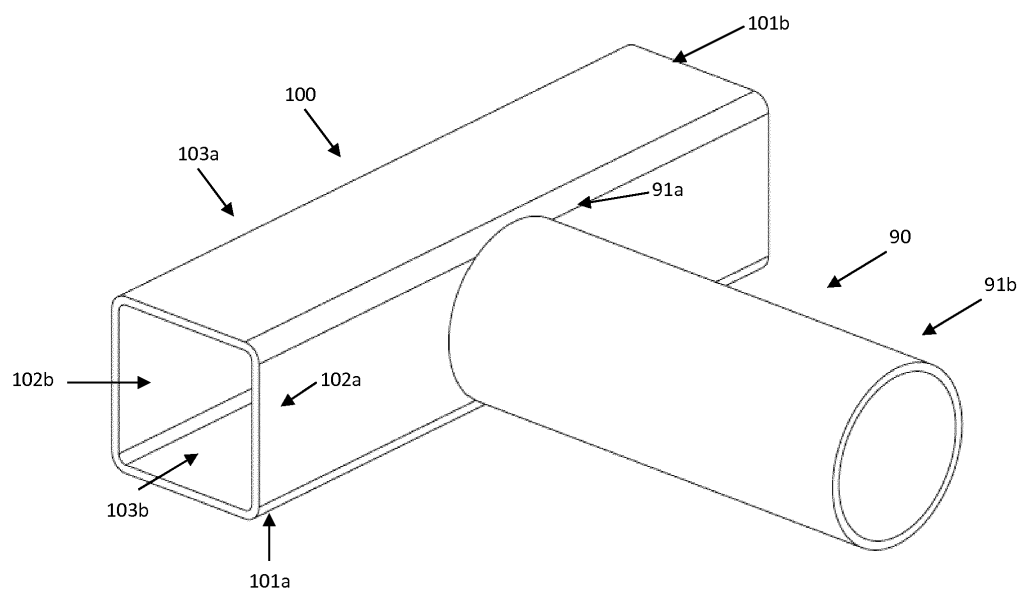


FIGURE 5B

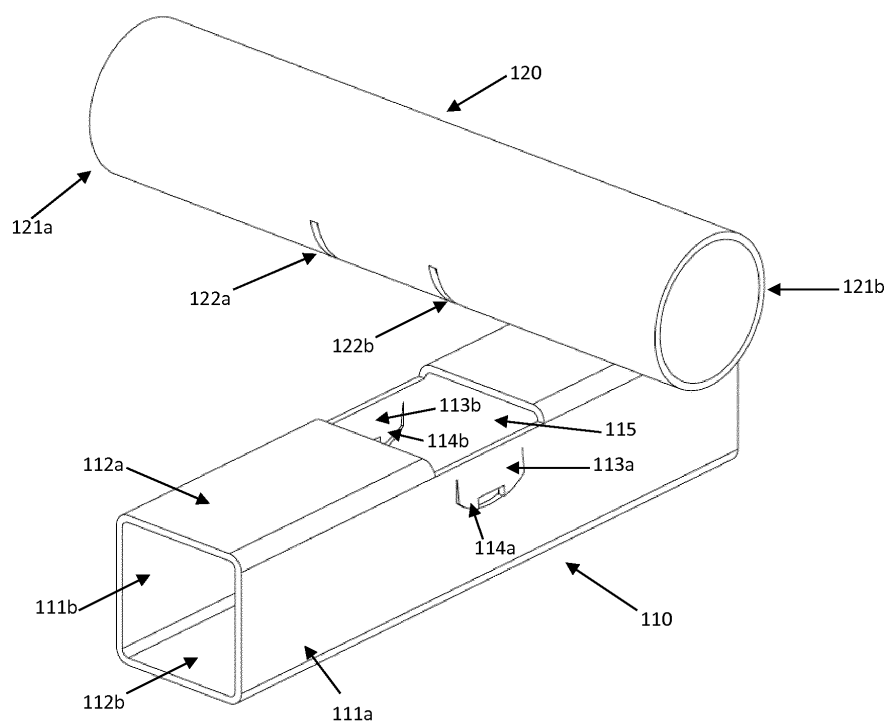


FIGURE 6



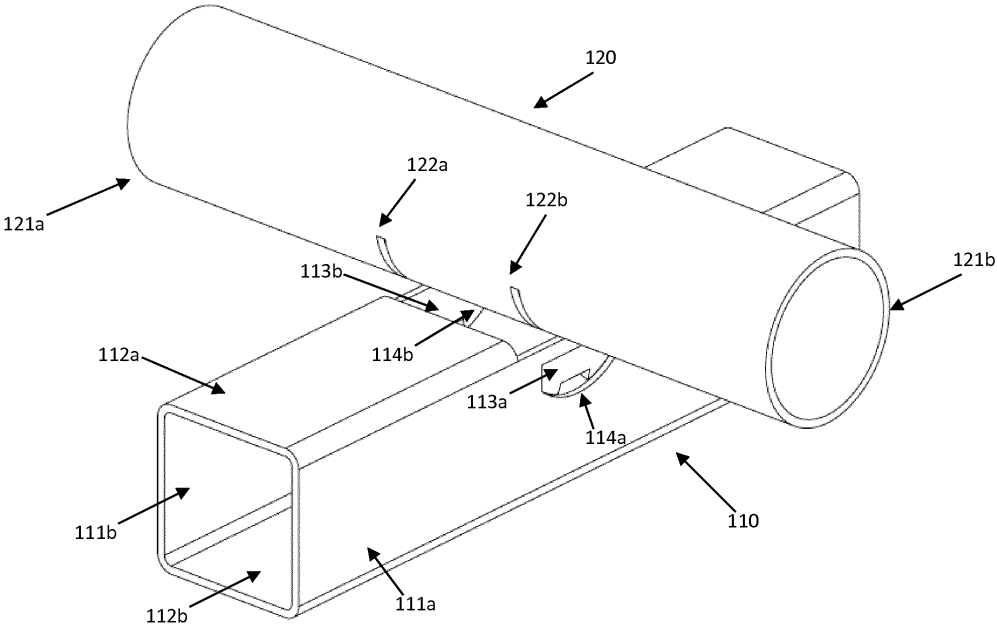


FIGURE 6A

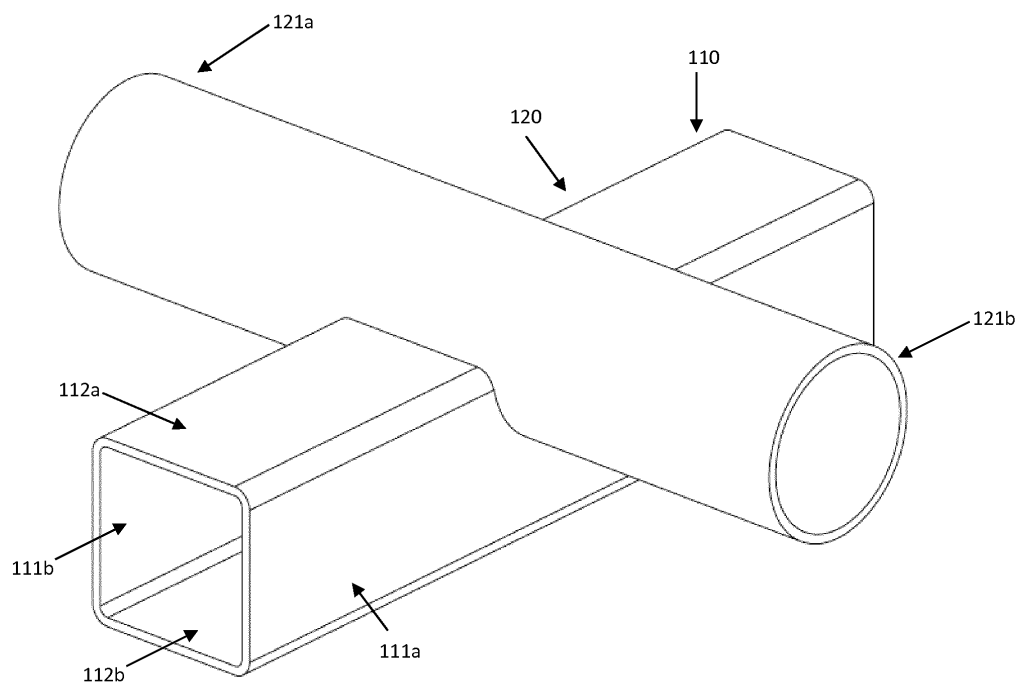


FIGURE 6B

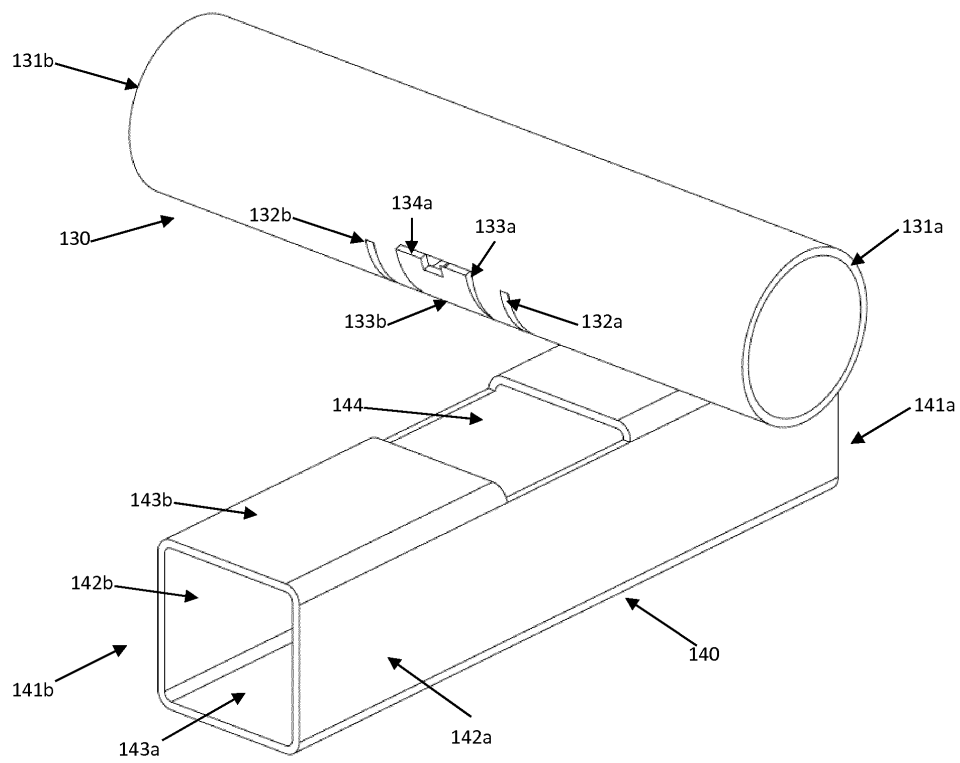


FIGURE 7

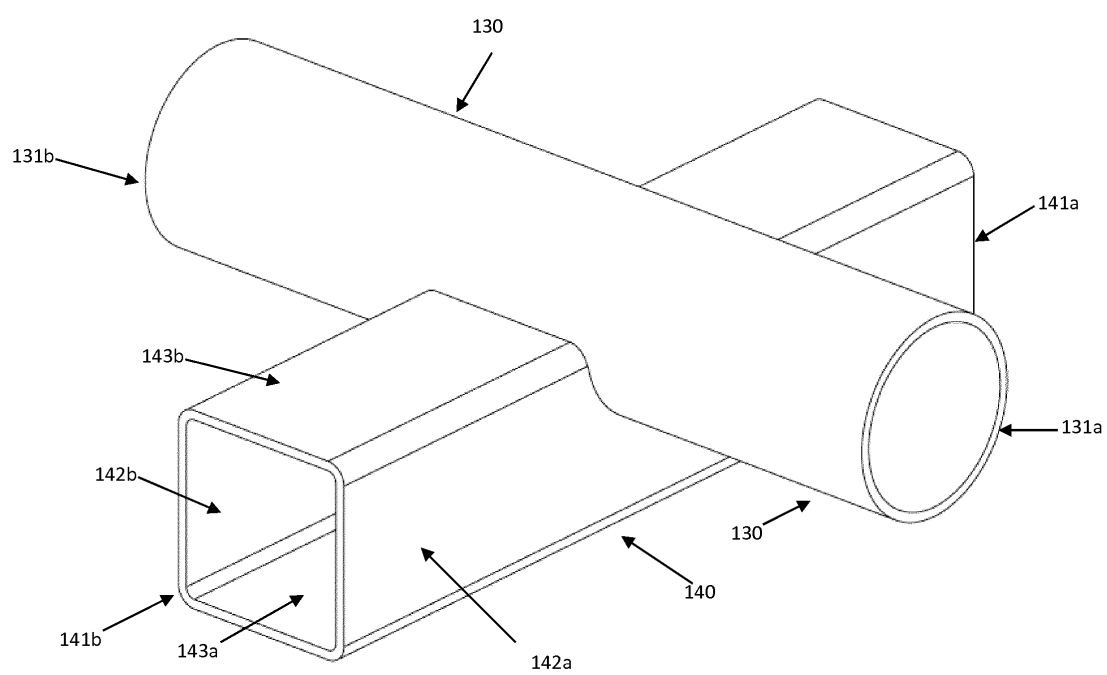


FIGURE 7A

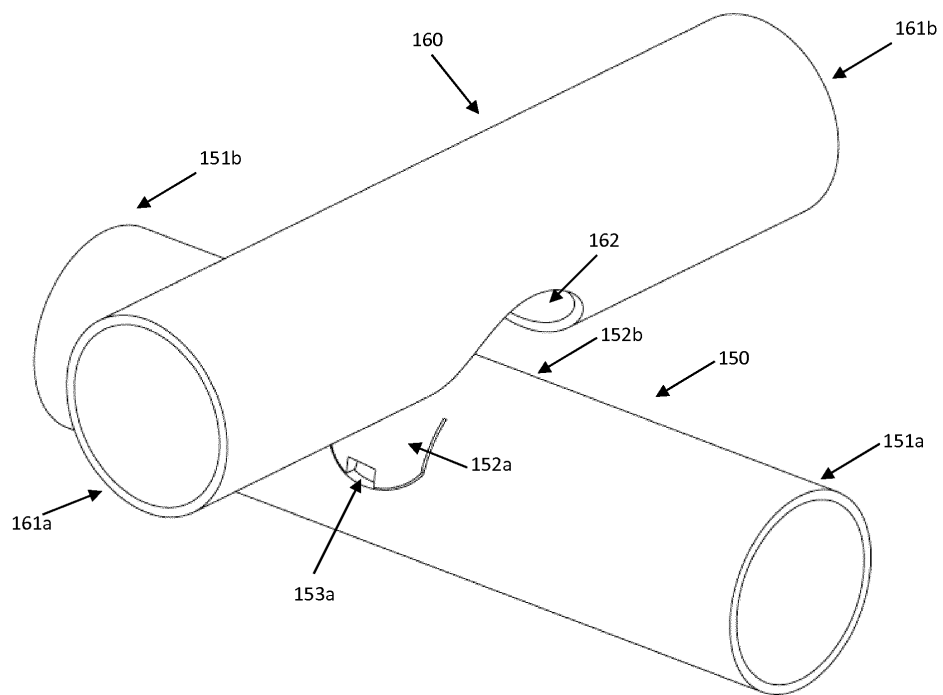


FIGURE 8

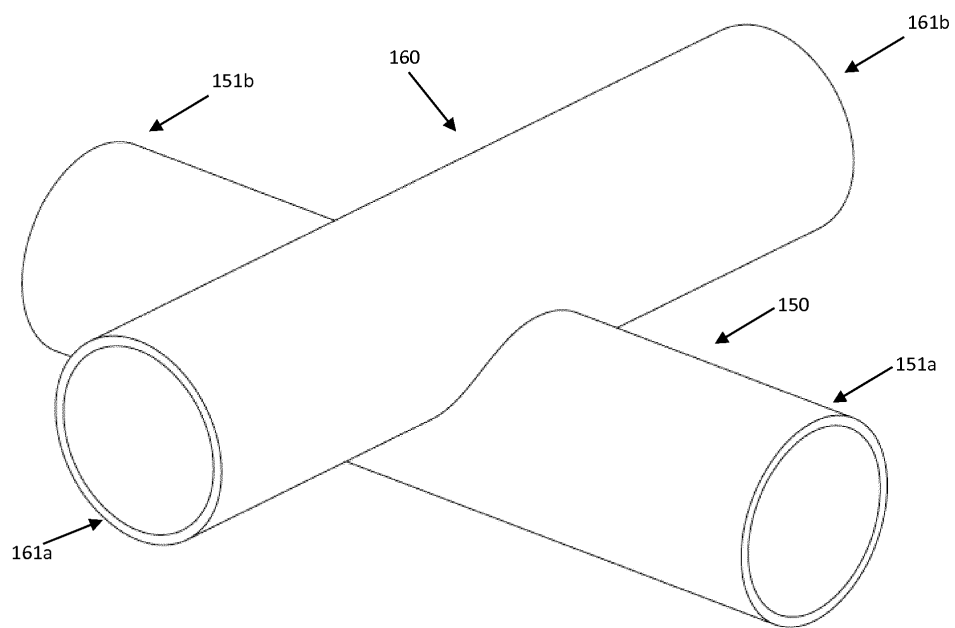


FIGURE 8A

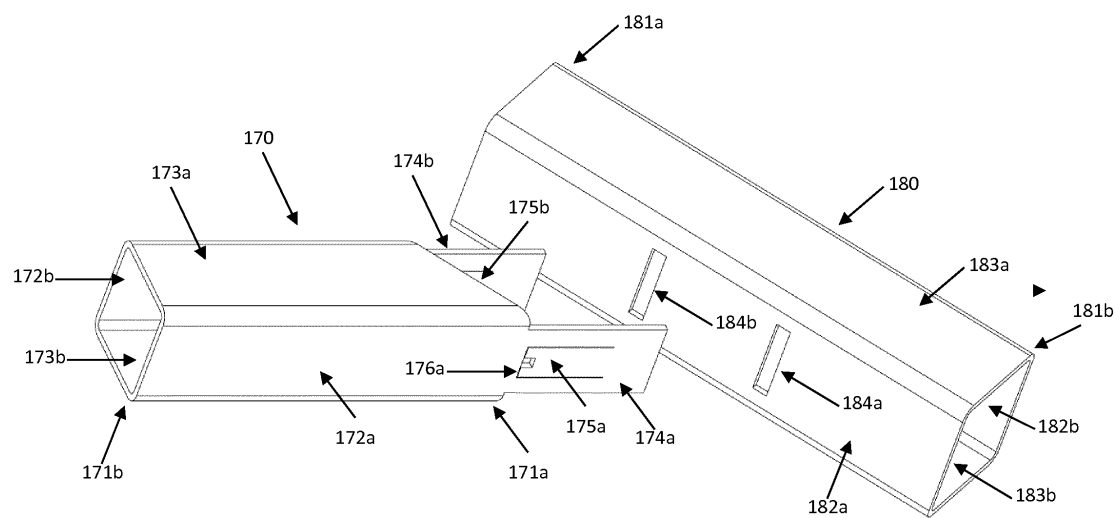


FIGURE 9

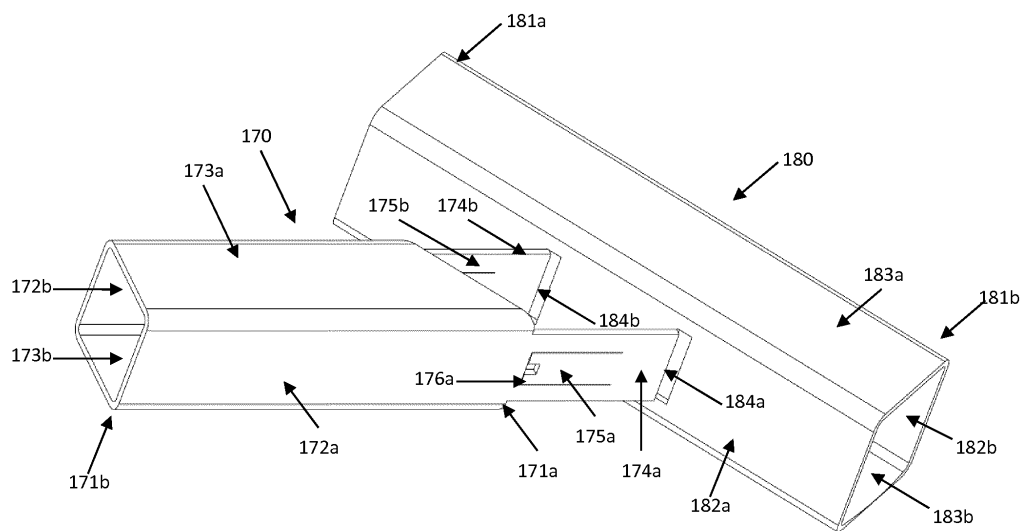


FIGURE 9A



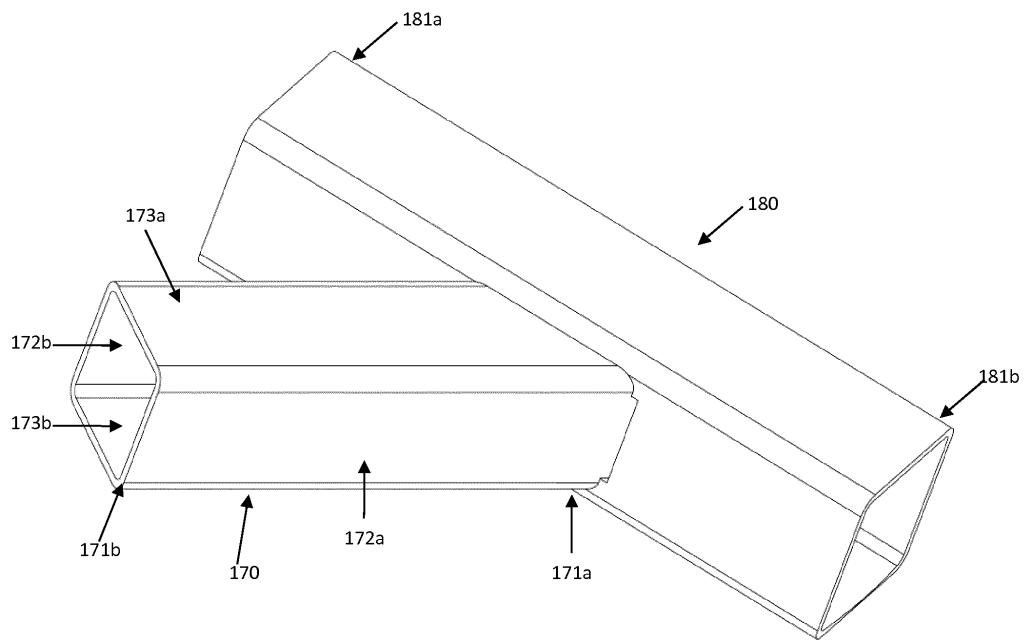


FIGURE 9B

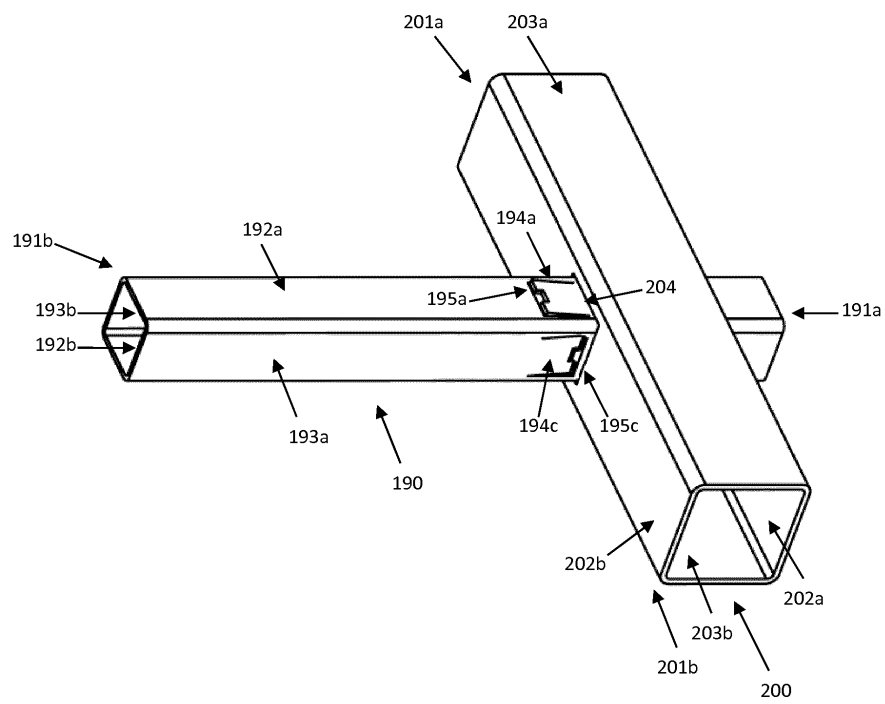


FIGURE 10

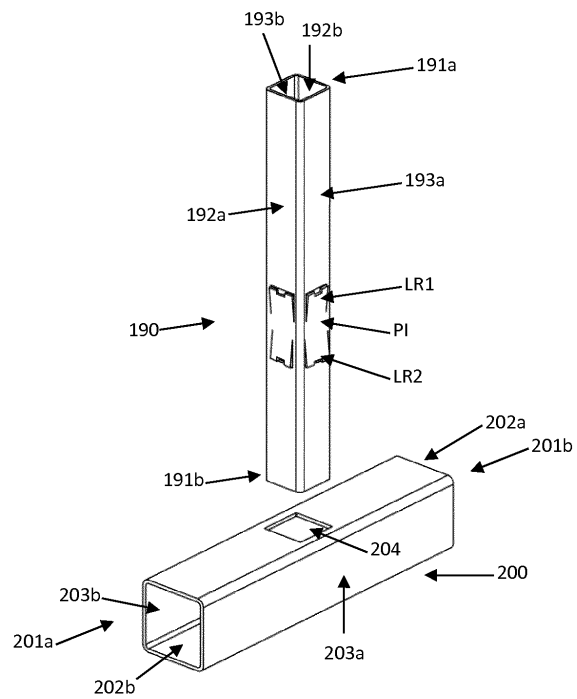


FIGURE 10A

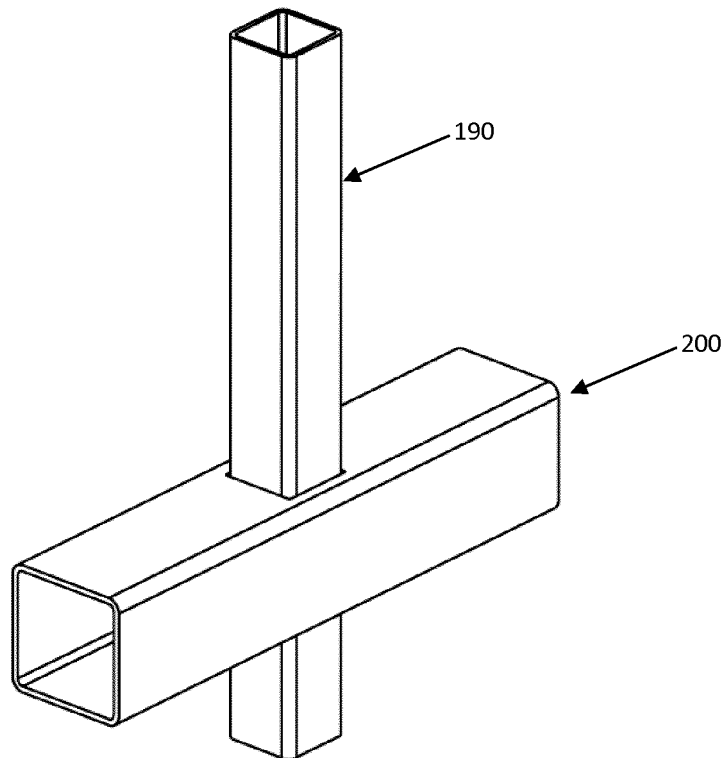


FIGURE 10B

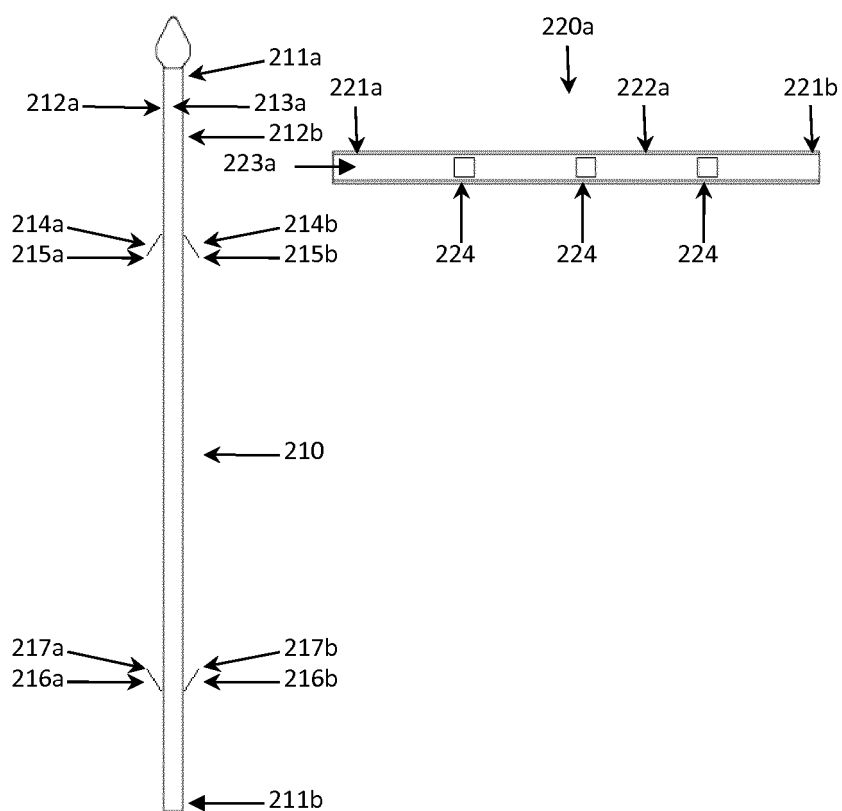


FIGURE 11

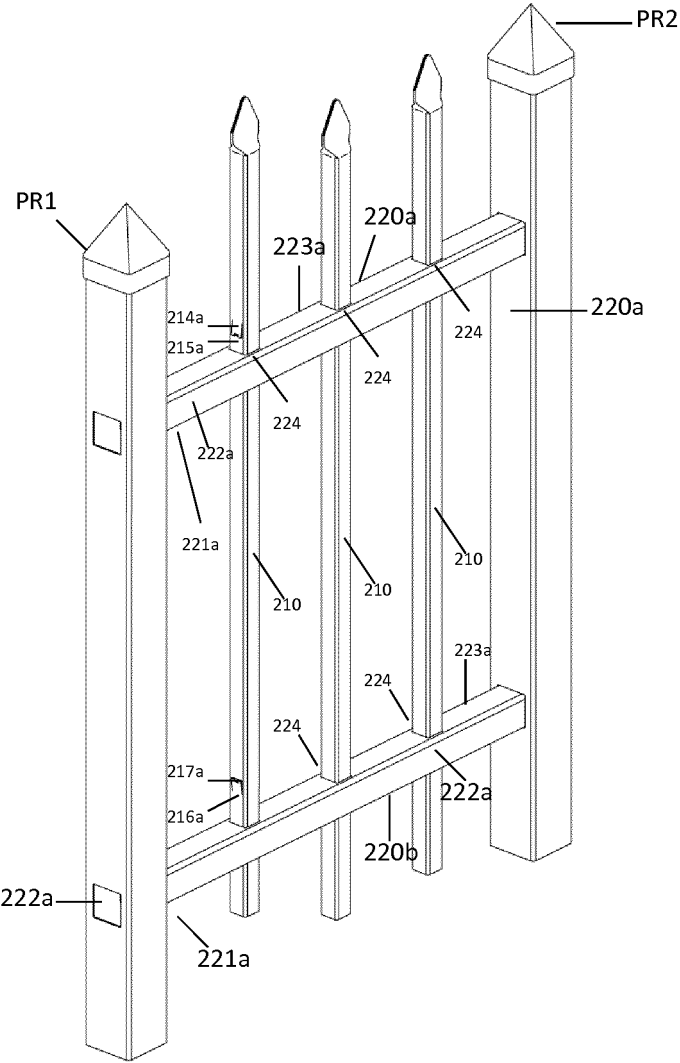


FIGURE 11A

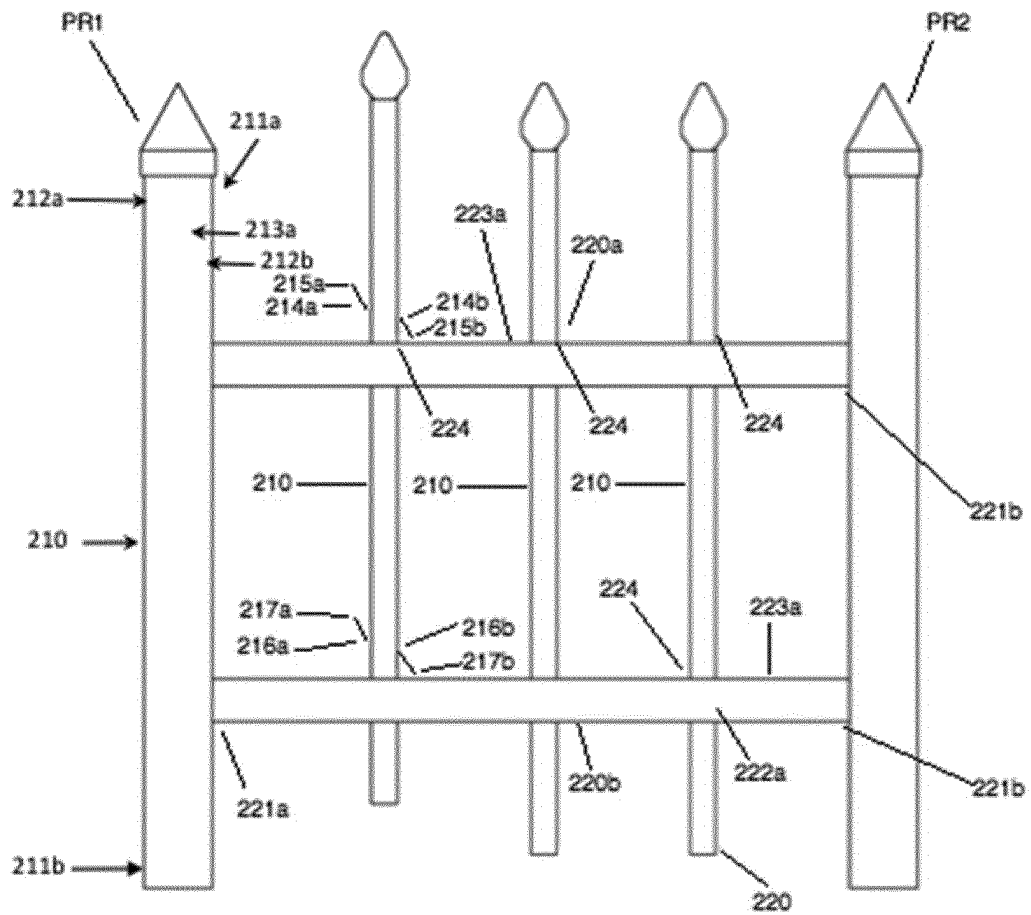


FIGURE 11B